Understanding housing and neighbourhood preferences of households aged 55 or older

Bram Kok
Master thesis

A study about a variety of households, looking for a house in the mid rent or owner-occupied housing sector in the Netherlands

Colophon

Understanding housing and neighbourhood preferences of households aged 55 or older

A study about a variety of households, looking for a house in the private rent or owner-occupied housing sector in the Netherlands

Master thesis

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bpd

Abstract

Ageing is a demographic development in the Netherlands that leads to an increasing amount of older households. Most people aged 55 years and older do not want to move or cannot find a house that meets their demand. This is expected to block the housing flow and increase the already existing mismatch on the housing market, which will lead to difficulties on the housing market for other household types. To give the other household types more opportunities on the housing market, houses for people aged 55 years and older need to be built. However, policy makers and housing developers often do not exactly know how to attract these households. In this thesis, the qualitative housing demand of people aged 55 years and older is researched. The main research question was *What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands?*. With a combination of literature research, traditional surveys and a conjoint analysis an answer is given to this question. The focus lay not only on the independent housing preferences, but also on the relative importance of the different preferences. A distinction between households based on age, mobility, future household composition and preferred owner-occupied housing type is made. The research showed that most household groups have equal preferences but the importance of certain housing qualities in their housing choice differs. The price and suitability for elderly people were important in the housing choice of most groups. But for groups that want to move to apartments (older people, less mobile people) for example, the housing type is more important and the tenure is less important compared to groups that want to move to one-family houses. This becomes especially clear when comparing the trade-offs different age groups make. To accomodate the different 55 years and older groups, it is best to focus on the housing preferenes of people aged 65 years and older, as these people are pickier than people aged 55-64 and housing preferences less often change after this age.

Keywords – People aged 55 years and older, owner-occupied, private rental sector, housing preferences, housing qualities, vicinity qualities, conjoint analysis

Preface

In front of you, you find my graduation thesis for the master Management in the Built Environment of the TU Delft: understanding housing and neighbourhood preferences of households aged 55 years or older. I found out that people aged 55 years and older often do not want to move or at least are really critical in their search. They often keep living in the houses they have been living in since their children were little. I also recognize this situation with my own grandma. In 1976, my grandma moved to a large detached dwelling with a garden of 800 square meters together with my grandfather, father and two uncles. Fourteen years later, the last child moved out. One year later my grandfather suddenly past away. From that point on, she lived there all by herself. In the first years after the passing of my grandfather, she considered moving to a courtyard. At a later point in time, she considered to move to an apartment. Unfortunately, no apartment with a view on the Vecht and five rooms (imagine the whole family wanting to stay over) for €300.000 was found. Last year, she passed away, in her palace where she has lived for almost thirty years on her own. Did she not want to move, or was the qualitative supply inadequate? In this thesis, I have researched what kind of housing would stimulate people aged 55 years and older moving houses.

Bouwfonds Property Development was also interested in this subject and were so kind to take me as an intern. I would like to thank them for this opportunity and by helping me find more respondents than I could ever dream of. Especially thanks to Cárin, for asking critical questions, being patient, staying positive and being eager to learn from my research as well.

I want to thank my TU Delft supervisors for their flexibility, detailed feedback and guidance. Harry, thanks for helping me master conjoint analysis. Joris, thanks for being so sharp. Next to that, I want to thank Peter Boelhouwer for temporary taking over the supervisions at the end of 2020.

It has not been an easy journey. As usual, I have been overdoing things with work, committees and extra courses. In combination with getting the coronavirus and other personal circumstances, this has led to a delay that was only eliminated in the last weeks before graduating. Luckily I had my committee members, roommates, friends, Felicia and family who all accepted my grumpiness and dullness. Thank you for that.

And special thanks to Joris Blokker for placing a bet that only he could lose. I will get you a crate of beer.

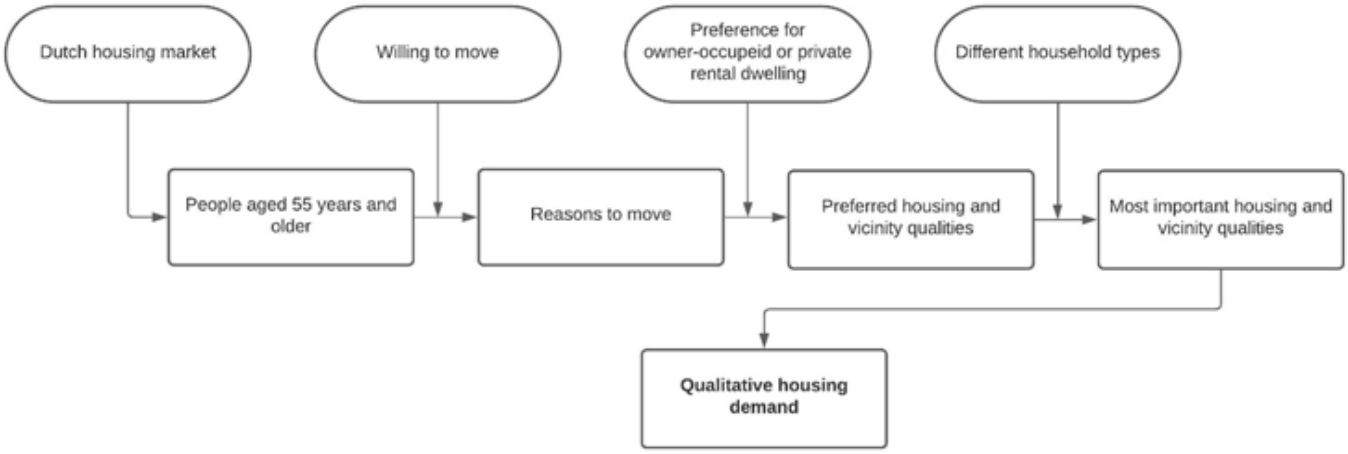
Enjoy reading my thesis.

Bram

Executive summary

Problem statement

Ageing is a demographic development in the Netherlands that leads to an increasing amount of older households. Most people aged 55 years and older do not want to move or cannot find a house that meets their demand. This is expected to block the housing flow and increase the already existing mismatch on the housing market, which will lead to difficulties on the housing market for other household types. To give the other household types more opportunities on the housing market, houses for people aged 55 years and older need to be built. However, policy makers and housing developers often do not exactly know how to attract these households. Studies on their housing preferences have already been conducted. Next to that, studies on the general importance of different housing and vicinity qualities have been conducted. However, preferences can change over time and no studies on the importance of different housing and vicinity qualities according to the 55 years and older households have been conducted. Therefore this is the main goal of this research. The corresponding conceptual scheme is added in the figure below.



conceptual scheme thesis (own image).

Internship

The research is combined with an internship at Bouwfonds Property Development (BPD), the biggest urban area developer in the Netherlands. To be able to satisfy the qualitative housing demand, a research department at BPD is founded. This department is responsible for market analysis and thematic researches. In the light of the housing need for people aged 55 years and older, an internship position on the research department was available.

Research question & sub-questions

The main research question is: *What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands?* To answer this question, five sub-questions are developed:

Sub question 1: What are the characteristics of people aged 55 years and older on the Dutch housing market?

Sub question 2: What are motivations of people aged 55 years and older in the Netherlands to move?

Sub question 3: What are the housing and vicinity preferences of Dutch people aged 55 years and older that are willing to move to a private rental or owner-occupied dwelling?

Sub question 4: Which Dutch 55 years and older subgroups that are willing to move to a private rental or owner-occupied dwelling can be distinguished?

Sub question 5: What are the most important housing and vicinity qualities for the different Dutch 55 years and older groups that are willing to move to a private rental or owner-occupied dwelling?

Methods

The first three sub-questions are answered by a literature study, for which thirty sources are selected. The literature will be backed up by quantitative data of which most is derived from the Centraal Bureau voor de Statistiek (CBS) and Woononderzoek Nederland (WoON).

The fourth and fifth research questions will be answered by conducting a survey that contains a traditional and conjoint measurement part. A conjoint analysis can be used to find the trade-offs in housing qualities that (potential) housing purchasers or tenants make in their search for a new dwelling because it gives information on how positive or negative a certain housing quality is valued.

Characteristics of people aged 55 years and older

The characteristics of people and households aged 55 years and older are important in understanding their future housing choices. The age of households is defined by the age of the oldest person in the household and therefore only one member of the household has to be 55+ to become an 55+ household. The 55+ household group is diverse in for example age cohorts, the composition of the household, the wealth and its mobility. In the past 20 years, the share of people and households aged 55 years and older has increased a lot. From 2029, the share of 55+ households is expected to be over 50%. The north will be the region with the highest share of 55+ households. The share of 55+ households really differs per municipality, as all municipalities know different demographic, socioeconomic and cultural trends.

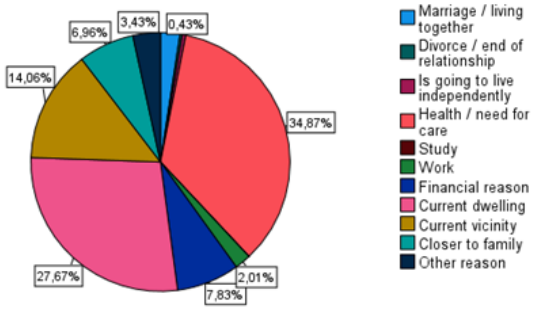
The household composition of people aged 55 years and older is changing. Compared to different generations, the share of couples has decreased for people aged 55-64 and increased for people aged 65+. This share is expected to decrease for the 65+ group in the future as well. The share of families with children in the 55-64 age group has increased too. In the older groups, most children have already moved out.

Due to better access to education, the amount of highly educated men and especially women has increased. Therefore, the current generation of people aged 55 years and older has a better income than previous generations. Due to this higher income and due to stimulation of home-ownership, the amount of homeowners has risen as well. Due to the increasing housing prices and amortization of mortgages, most homeowners in these age groups have high housing equity. The higher wealth also leads to better health. Labour nowadays is less physically exhaustive than in the past. This is one of the reasons people stay healthy and mobile for a longer time. However, still 49% of the people aged 55 years and older has limited mobility. This percentage increases by age.

As explained before, the share of people that owns a house has risen. This share is highest in the low age groups. Relatively more people with reduced mobility live in rental houses. Until the age of 85, most people live in an one-family house. After this, most people live in multiple-family houses. Due to for instance deinstitutionalization, the aim to let people live independently for a longer time and only let them move to a nursing home institute if absolutely necessary, and a low willingness to move, people aged 55 years and older keep living at the same place until an older age.

Willingness to move

only 24,6% of the people aged 55 years and older is willing to move. This percentage decrease when age increases. For these people, moving houses most often is not urgent, which means that they only move when they find a dwelling that perfectly fits their qualitative demand. The reasons why people are willing to move are categorized by life events, unsatisfying housing and vicinity qualities or personal reasons. Life events can take place expected or unexpected. Examples are decreasing health, retirement and change in household composition. For people aged 75 years and older, two out of three moves are unexpected. Examples of unsatisfying housing and vicinity qualities are the size of the dwelling, its suitability for older people, its maintenance condition, the availability of a garden, the neighbourhood (unsafety, neighbours or lack of services) and the location. Examples of personal reasons are wanting to move back to the place of birth, wanting to move closer to friends and family or financial reasons (wanting to decrease housing costs or release equity). The figure below shows how often different reasons are named as the most important reason to be willing to move.



The most important reason for people aged 55 and older to be inclined to move (Edited from: WoON, 2018).

Desired qualities

From this point on, the research focuses on people aged 55 years and older that are willing to move to a private rental or owner-occupied dwelling. In all age groups, most people prefer an owner-occupied dwelling, although the share decreases as age increases. In the 55-64 age group, a small majority wants to move to a one-family house. In the other age groups, a clear preference for the multiple-family house exists. 36,4% of the people wants to move to a house that is suitable for elderly people. Only in the 75+ age group a majority has this preference. What stands out is that although the 55 years and older people on average want to live smaller (the older they get, the smaller they want to live), 72,4% would still like to retain or upgrade the surface of their living room. People aged 55-64 prefer three rooms next to their living room, older people two.

27% of the people aged 55-64, 34% of the people aged 65-74 and 47% of the people aged 75 years and older does want to move within the neighbourhood they are currently living in. 55% of those people aged 75 years and older does not even want to move if they cannot find a house in their current neighbourhood. 55+ people find public transport important and want shops within walking distance in their future neighbourhood. Next to that, the neighbourhood should provide possibilities to meet and a mix of housing types.

Survey design

The population for the survey is Dutch people aged 55 years and older that are willing to move within five years to a rental or owner-occupied dwelling. The survey consists of a traditional part, in which questions are asked about the future household composition, desired housing qualities and current living situation, and a conjoint measurement part. The included attributes and attribute levels for the conjoint analysis can be found in the table below.

Attributes and corresponding levels.

Attribute	Level	Brief explanation
Housing qualities		
Tenure	owner-occupied rental	-
Housing type	one-family house apartment	-
Housing surface	70 sqm 100 sqm 130 sqm	The surface of all floors combined.
Number of rooms	3 rooms 4 rooms 5 rooms	The total of living, sleeping, study and work rooms.
Elderly house	yes no	A dwelling that is meant for elderly people is easy to use by people that have a decreased mobility.
Price	low class mid class high class	The fifteenth (low), fiftieth (middle) and eighty-fifth (high) percentage of housing transaction prices of newly built owner-occupied housing or the fifteenth (low), fiftieth (middle) and eighty-fifth (high) percentage of rental prices above the social rent limit, dependent on the desired living province.
Vicinity qualities		
Building heights	mainly low a mix of heights	The desired heights in the neighbourhood. Low means a maximum of four storeys.
Distance to health facilities	less than 500m 500m-1000m more than 1000m	The door-to-door distance to health facilities like medical practices, pharmacies and physiotherapists.
Contact with neighbours	a lot of privacy a lot of contact with neighbours	-
Ambiance	quiet lively	This relates to the amount of people and activities on the streets.
Composition of the neighbourhood	mix of ages people of the same age	-

In total, 1570 useful responses are received. 852 are aged 55-64, 604 are aged 65-74 and 114 are aged 75 years or older.

Preferences

The preferences for all attributes are also asked in the traditional part of the survey, with an exception of the price and distance to health facilities. For those attributes, the acceptable level is asked. The answers given by the respondents are shown in the table below. The preferences in the conjoint analysis mainly corresponded. Differences are that people aged 75 years and older prefer a rental dwelling (although not significant), people prefer the lowest price and people prefer health facilities within 500 meters from their house. Not many differences between the main preferences per age group can be found.

The importance ranking of the attributes for the different age groups.

	Total	55-64	65-74	75+
Tenure				
owner-occupied	85,7%	89,1%	82,8%	76,3%
rental	14,3%	10,9%	17,2%	23,7%
Housing type				
one-family house	54,2%	64,1%	43,7%	36,0%
apartment	44,3%	34,9%	54,5%	61,4%
unknown	1,5%	1,1%	1,8%	2,6%
Housing surface				
<80 sqm	8,7%	6,7%	11,4%	8,8%
80-120 sqm	65,7%	64,8%	67,1%	65,8%
120 or more sqm	20,3%	22,8%	17,2%	17,5%
unkown	5,4%	5,8%	4,3%	7,9%
Number of rooms				
<4 rooms	34,1%	29,7%	38,6%	43,0%
4 rooms	51,8%	51,9%	52,0%	50,0%
5 or more rooms	12,3%	16,5%	7,6%	5,3%
unknown	1,8%	1,9%	1,8%	1,8%
Elderly housing				
yes	78,5%	72,9%	85,8%	82,5%
no	11,2%	16,2%	5,1%	6,1%
Indifferent	10,3%	10,9%	9,1%	11,4%
Acceptable price				
low class	40,4%	40,5%	41,9%	32,5%
mid class	46,3%	46,7%	44,2%	54,4%
high class	7,9%	8,2%	7,5%	7,9%
unknown	5,4%	4,6%	6,5%	5,3%
n=	1570	852	604	114

	Total	55-64	65-74	75+
Building heights				
mainly low	56,3%	52,9%	38,1%	40,4%
	18,7%	15,7%	21,5%	26,3%
	12,1%	11,0%	13,2%	14,0%
a mix of heights	16,0%	14,3%	19,2%	11,4%
unknown	6,9%	6,0%	7,9%	7,9%
Acceptable distance to health facilities				
less than 500m	7,6%	4,9%	9,6%	16,7%
500m-1000m	55,3%	49,2%	63,1%	59,6%
more than 1000m	31,1%	38,1%	23,3%	20,2%
unknown	6,0%	7,7%	4,0%	3,5%
Contact with neighbours				
a lot of privacy	25,2%	28,1%	21,9%	21,1%
	27,5%	27,2%	26,2%	36,0%
	26,3%	24,2%	29,1%	27,2%
a lot of contact with neighbours	16,0%	15,5%	17,4%	12,3%
unknown	5,1%	5,0%	3,5%	5,1%
Ambiance				
quiet	41,0%	44,1%	38,6%	30,7%
	26,9%	24,6%	29,5%	30,7%
	17,9%	17,0%	18,7%	20,2%
lively	9,9%	10,2%	8,9%	13,2%
unknown	4,2%	4,0%	4,3%	5,3%
Composition of the neighbourhood				
People of the same age	10,4%	10,3%	10,3%	11,4%
	14,9%	14,7%	15,2%	14,9%
	23,4%	22,7%	23,8%	26,3%
Mix of ages	45,2%	45,2%	45,2%	44,7%
unknown	6,2%	7,2%	5,5%	2,6%
	1570	852	604	114

Different household types

With the use of the outcomes of the traditional survey, different household types In which clear differences in housing preferences exist are defined. Next to a distinction in age groups, a distinction between mobile and not-mobile people, future single households and future couple households, and people that prefer an owner-occupied one-family house and people that prefer an owner-occupied multiple-family house is made. On all these subgroups, a conjoint analysis will be conducted.

Importance

The importance ranking, an overview of the most till least important attribute in the housing choice of a group, of the different age groups is showed in the table below. The table shows how the 55-64 group differs from the total sample and how importance develops as people get older. Compared to the preferences, much more differences between the different household groups can be found, which is one of the strengths of the conjoint analysis. Looking at the importance of the different qualities in the housing choice of the different age groups, a few things stand out. Price

has the same, and most, importance for the 55-64 and 65-74 group, but attenuates in the 75+ group. The importance of suitable housing for elderly people increases by age and is the most important quality in the 75+ age group. In most groups, these are important attributes. Tenure is quite important for the youngest age group, as a third-ranked quality, but sinks to the least important quality for the 75+ group. Housing type goes the other way around and rises from the least important to the second most important quality. The importance of housing surface seems to be stable through the age groups, where the importance of the number of rooms increases a little. In other groups, a comparable trend related to housing type and tenure can be found. If groups prefer one-family houses, housing type is less important, and being an homeowner is more important in the housing choice compared to groups that prefer apartments.

The importance ranking of the attributes for the different age groups.

Total	55-64		65-74		75+	
Price	– Price		– Price		↑ Elderly housing	+1
Elderly housing	– Elderly housing		– Elderly housing		↑ Housing type	+3
Housing surface	↑ Tenure	+1	↑ Housing surface	+1	↓ Price	-2
Tenure	↓ Housing surface	-1	↓ Tenure	-1	↓ Housing surface	-1
Contact with neighbours	– Contact with neighbours		↑ Housing type	+5	↑ Number of rooms	+2
Distance to health facilities	↑ Ambiance	+4	↑ Distance to health facilities	+1	↑ Contact with neighbours	+3
Building heights	↓ Distance to health facilities	-1	↑ Number of rooms	+2	↓ Distance to health facilities	-1
Number of rooms	↓ Building heights	-1	– Building heights		↑ Ambiance	+2
Housing type	↓ Number of rooms	-1	↓ Contact with neighbours	-4	↓ Building heights	-1
Ambiance	↓ Housing type	-1	↓ Ambiance	-4	↓ Tenure	-6

In the housing choice made by the respondents, the vicinity qualities score low in relative importance. Vicinity qualities can therefore have been overshadowed by housing qualities. To understand the preferences within the vicinity qualities better, an equivalent table about the outcome of the rating task for vicinity qualities is added below. no differences can be found between the 55-64 and 65-74 age groups, the mobile group, the future couples group and the group that wants to move to an owner-occupied one-family dwelling. In the vicinity qualities importance ranking, the age composition of the neighbourhood is also taken into account. Their importance order is: low building heights, a lot of privacy, a quiet neighbourhood, proximity to health facilities and living between neighbours of a mix of ages. For the 75+ group this is completely different. For them, proximity to health facilities is the most important, followed by a quiet neighbourhood, low building heights, living between neighbours of a mix of ages and having a lot of privacy. proximity to health facilities is also relatively more important for the not-mobile group, the future single group and the group that wants to move to an owner-occupied multiple-family dwelling. The last thing that stands out is mobile people find having a lot of privacy a lot more important in their housing choice than not-mobile people.

The importance ranking of the different vicinity attributes for the different age groups.

Total	55-64 & 65-74	75+	
Building heights	– Building heights	↑ Distance to health facilities	+3
Contact with neighbours	– Contact with neighbours	↑ Ambiance	+1
Ambiance	– Ambiance	↓ Building heights	-2
Distance to health facilities	– Distance to health facilities	↑ Composition of the neighbourhood	+1
Composition of the neighbourhood	– Composition of the neighbourhood	↓ Contact with neighbours	-3

Willingness to pay

With the data, it is also possible to make some statements about willingness to pay. The housing quality upgrade for which people are willing to pay most is a dwelling that is suitable for elderly people. The older people get, the more they value this. The data shows that as people get older, they are less willing to pay for housing that deviates from their first preference, compared to this preference. They are also less willing to move to the house that is preferred by the youngest age group than the youngest age group is willing to move to the house that is preferred by the oldest age groups. So older people become pickier. Therefore it is especially important to build the houses that fit the qualitative housing demand of the older age groups.

Conclusion

After answering all sub-questions, it is possible to answer the main question: What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands?

The current generation of people aged 55 years and older differs from previous generations. In general, they are wealthier than their predecessors and have more owner-occupied and bigger houses. This is also reflected in their housing preferences. More people are interested in moving to owner-occupied houses and most people are looking for owner-occupied houses with four rooms, for the youngest group even more rooms can be implemented, and of 130 square meters, although 100 square meters suffices for most groups. Fact is that none of the groups is positive about a housing surface of 70 square meters. So the 55+ age groups need more luxurious houses than their predecessors. However, they are also used to having low living costs, which could mean that their demands are unrealistic.

The age group 55-64 wants one-family housing, although this is not a hard preference. By realizing one-family houses, the suitability for elderly people has to be taken into account. This is really important for all groups that are analysed. This means that at least a kitchen, living room, bathroom and bedroom have to be reachable without walking stairs or adjustments should be possible to realize this. For people aged 65 years and older, it is best to realize apartments. All buildings should have wide door openings and sanitary rooms and be free from plinths. The apartments should be reachable without stairs and preferably be in buildings with a maximum of four storeys, as this maximum building height within neighbourhoods is preferred. Most people want to move to a house with a living room that is equally big or bigger than their current living room, as people spend more time at their house as they get older. Therefore it is advised to make sure the living room is and looks spacious.

Looking at the vicinity, people aged 55 years and older, in general, do not want to live in highly urbanized city centres. On the other hand, they also prefer not to live in rural areas without closeby amenities. As people aged 55 years and older often want to keep living in their current neighbourhood, it is advised to make sure part of the area developments takes place in neighbourhoods that already consist of people aged 55 years and older. If the target groups are people aged 75 years or older, not-mobile people, single households, or people that want to move to owner-occupied multiple-family houses, it is important to include close-by health facilities in the design. However, the housing buildings themselves can best be focused on living as most people aged 55 years and older value quietness and their privacy.

For BPD, it would be best to focus on the 65+ people. Only looking at age and preferences, two main groups can be distinguished: people aged 55-64 and people aged 65+. Therefore, chances are that people aged 55-64 move to a house, that will not fit their demand anymore ten years later and they want or need to move again. For the 65+ group, not a lot of changes in housing demand will take place as they get older. Next to that, older people are pickier and are less willing to move to the house that is preferred by the youngest age group than the youngest age groups is willing to move to a house that is preferred by the oldest age groups.

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1. Introduction

1.1. Context

The Dutch housing market is known as a flow market. A characteristic of flow markets is the process of persons moving up and down the housing ladder to vacant houses. If the household composition or income of a person changes, this person moves to a house that fits its adjusted demand (Van der Heijden, Dol & Oxley, 2011). Most Dutch people move multiple times in their life to adjust their house to their developed housing preferences (Van der Heijden & Boelhouwer, 2018). The first home of a Dutch person is often small or shared with roommates. After increasing wealth, this person moves to a bigger house, sometimes with a partner, composing a new household. This happens again when the household gets children. When the children move out, people generally move back to a smaller house (De Jong & Daalhuizen, 2014).

A housing flow starts if one house with specific qualities becomes vacant. An example is a newly built house. People that are living in a scarce house and are looking for a house with the qualities of the newly developed house will move to this house. Now their scarce house becomes available. People in another scarce house that were looking for a house like the newly vacant house, can now move to this vacant house. This event will be iterated until a new household enters the market. This process is illustrated in figure 1.1 (Zeelenberg & Van Kessel, 2014).

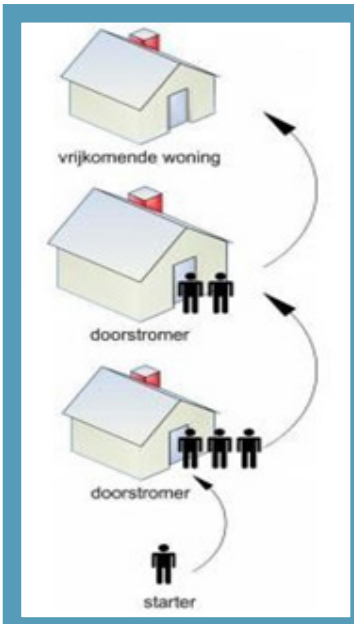

Figure 1.1. Housing flow (Zeelenberg & Van Kessel, 2014).

1.1.1. Mismatch on Dutch the housing market

In a country with a correct housing flow, every household could live in a house that best fits its housing needs and financial position. Crutzen and Hagen (2020a) found a qualitative mismatch on the Dutch housing market, which means that the Netherlands do not have a correct housing flow. They have defined which housing surfaces are needed for different household sizes. This is calculated by indicating the standard surface for basic needs (kitchen, living room, bath room) and adding the median extra surface that is used for every extra person in a household in the Netherlands at this moment. They have found differences between the needs, according to their criterion, and actual situations.

Based on their findings, they have researched how many households could live smaller and should live bigger. They have divided the households by household age and have indicated the mismatch per household age in the graph that can be found in figure 1.2. Based on this graph, they concluded that households with an age of fifty and older generally live bigger than needed. They assume that those people needed to live this big at the time their children lived at home. However, most of these households are empty nest households now. They concluded that the household ages of thirty-five to fifty, which still have children living at home, relatively more often live smaller than desired (Crutzen & Hagen, 2020a).

Changing demographics can partly declare the mismatch on the housing market. Household compositions are changing. Families become smaller, the amount of one-person households is increasing, as is the amount of one-parent households (Ekamper, 2020). Another demographic change that is taking place is ageing. In the coming

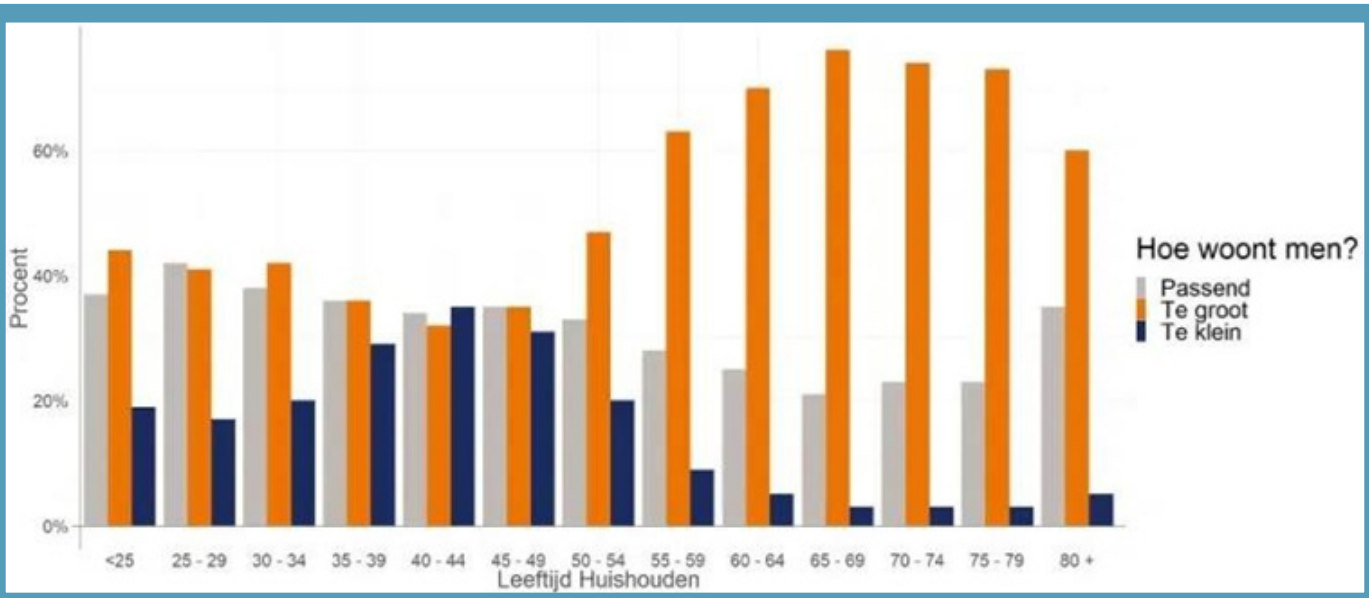

Figure 1.2. Housing surface per housing size (Crutzen & Hagen, 2020a).

decades, the amount of seniors is expected to rise quickly because of this phenomenon. (De Jong & Daalhuizen, 2014). The share of seniors active on the housing market is expected to increase as well (Blijie et al., 2015). A lot of seniors do not move. This phenomenon blocks the housing flow and therefore makes it harder for starters to find suitable housing (De Jong & Daalhuizen, 2014). Multiple reasons for this can be found in literature.

1.1.2. People aged 55 years and older

In literature, different names and characteristics are given to the senior group. In the report Wonen in beweging (Blijie et al., 2015) based on WoON (2015), seniors are people aged 55 years and older. Around this age, the amount of households that live too big, according to Crutzen & Hagen (2020a), rises significantly. Therefore it is interesting to discuss the senior household type. However, to avoid the discussion of whether seniors is the right definition of these households, in this thesis they will be called people aged 55 years and older. This household type can be split into multiple subtypes, for example based on age, household composition, income and health (Blijie et al., 2009a).

Not only the amount of, but also the share of people aged 55 years and older that is still active on the housing market is expected to increase due to ageing and deinstitutionalization. Deinstitutionalization is a Dutch governmental policy that determines that people have to live independently as long as possible, even if they have some physical limitations or other health issues (Blijie et al., 2015). Studies on the desires of older people find that this matches their demand (Doekhie et. al., 2014). Next to that, people become older and are vital for a longer period (Sprinco, 2018). Most of the older people want to stay in their current house.

The willingness to move generally reduces when age increases (de Groot, Manting, & Boschman, 2008). Reasons for this are that older people often have paid off (a great amount of) their mortgage and moving would lead to more expensive housing costs, the fear of losing the social network they have built up in their current neighbourhood (Raad voor de leefomgeving en infrastructuur, 2020) or that their current house suffices their qualitative demand (Doekhie et. al., 2014).

Other older people see that their house or vicinity does not match their needs anymore. Their social network decreases which leads to loneliness. However, they think that moving is not an option. They do not know where to go, are afraid that they cannot afford another house, do not want to leave their neighbourhood and do not know who can help with the physical moving (Rijksoverheid, 2020).

Next to that, the ratio of people aged 55 years and older that wants to move and actually moves is smaller than the ratio of other household types that want to move and actually move. They are pickier and often have less urgent reasons to move (de Groot, Manting, & Boschman, 2008). Therefore, they only move to a house that completely suits their qualitative demand (Zeelenberg & Smeulders, 2013).

One of the goals of the Dutch housing programme 2018-2021 is to stimulate the housing flow to give starters and households that do not live in a house that matches their preferences a chance on the housing market. (Rijksoverheid, 2018). Moving 55+ people can trigger the housing flow. However, according to Rijksoverheid (2018), no sufficient housing supply is available for them. Crutzen and Hagen (2020) state that policy makers and housing developers often do not exactly know the housing preferences of these household types and conclude that the houses that they desire are not built (enough). Therefore, more research on their qualitative housing demand has to be conducted.

1.1.3. Housing qualities

Qualitative housing demand is the demand for houses with certain qualities. The word qualities is distracted from the Latin word qualitas and means characteristic. It can be seen as an objective concept. From itself, a quality does not contain a value. However, individuals often determine a value to a quality (Rosmalen, 1994). When someone states that a house is big, for example, one gives a value to the quality surface. In this case, quality is a subjective concept (Rosmalen ,1994).

The Dutch government uses multiple instruments to assure good quality housing projects. One of those instruments is het bouwbesluit (the building decree). In the building decree, the minimum technical requirements that a building should match are stated. These requirements include safety, health, usability and energy efficiency (Sociaal-Economische Raad, 2010). Next to that, constructions have to meet spatial planning laws, zoning rules and the requirements of building permits to assure qualitative environments (Tu, De Haan & Boelhouwer, 2017). These instruments change over time due to stricter quality requirements. An example is the energy performance coefficient (EPC) in the building decree. In 1995, the maximum EPC a construction project was allowed to have was 1,4. This number is reduced multiple times ever since (Kappert et al., 2013).

Generally, more qualities can be distinguished and other requirements are used in housing projects than the ones that are mentioned in the governmental instruments. De prijs van de plek (Visser & van Dam, 2006) and

Amenities and the attraction of Dutch cities (Garretsen & Marlet, 2017) are hedonic researches on the appreciation of different housing qualities for the whole Dutch population. In the study of Visser & Van Dam (2006), qualities are categorized by physical housing qualities, physical vicinity qualities, functional vicinity qualities and social vicinity qualities.

Physical housing qualities that have a great influence on housing choices according to Visser & van Dam (2006) are the housing surface, the number of rooms, the availability of a garage, the availability of a garden, the building period and the type of dwelling.

Physical vicinity qualities are qualities of the location itself. The most important physical vicinity qualities according to Visser & Van dam (2006) are the availability of public and recreational water and greenery. This is confirmed by Garretsen and Marlet (2017). Visser & Van dam (2006) found great differences in preferences between different provinces and rural and urban locations as well.

Functional vicinity qualities are related to the accessibility of services. The functional vicinity qualities that influence housing choice most are the proximity to public transport, to the city centre and to job opportunities. The functional vicinity qualities are the most researched qualities by Garretsen & Marlet (2017). They have researched for instance the influence of the proximity to sports clubs, sports facilities, a train station and cultural facilities like museums and musical venues, the supply of restaurants and cafes and the presence of a university.

The most important social vicinity qualities are the percentage of owner-occupied houses, the percentage of one-family houses, the percentage of immigrants and especially the social status score of the neighbourhood. (Visser & Van Dam, 2006). Garretsen & Marlet (2017) in their recent and more detailed study found that the effect of nuisance, crime rates and the share of different housing types in the neighbourhood are important as well. Not researched in both studies, but also influential on social vicinity qualities are the average income and the composition of the population in the neighbourhood. (Visser & Van Dam, 2006).

An overview of the mentioned qualities can be found in table 1.1.

1.1.4. Revealed and stated preferences

The desired housing qualities of consumers can be translated to the qualitative housing demand. The qualitative housing demand can be defined by research on revealed or stated preferences. The housing qualities that are mentioned before are revealed preferences. These are revealed in a research on price determinants of Dutch owner-occupied houses in the Netherlands. The housing transaction prices are determined by the supply and demand on the housing market. The transaction price therefore reflects the value that a consumer thinks the house is worth, based on its combination of housing qualities. A house with a presence of more qualities generally is more expensive (Visser & van Dam, 2006). Revealed preferences are preferences that are found by observing data on consumer choices in the actual market. It is assumed to reflect utility-maximizing behaviour, which means that people choose the option that best fits their preferences and possibilities (Timmermans, Molin & Noortwijk, 1994). Next to housing preferences, the market conditions, regulations and availability play a role in this decision (Van Middelkoop & Boumeester, 2014).

Stated preferences are based on the reaction of people to hypothetical houses. It is assumed that people take the market conditions into account in this type of research. (Timmermans, Molin & Noortwijk, 1994). Stated preferences show what the ideal house of a respondent, taking into account his personal conditions, would be. The housing market does not always offer this preference, which is why the actual housing choice often differs. Stated preferences therefore not always correspond with revealed preferences. However, both give an insight into the appreciation for certain qualities (De Groot, Manting & Mulder, 2012). Because the housing preferences for people aged 55 years and older are not met in the Dutch market, looking at their stated preferences might be more useful than looking at their revealed preferences. Multiple studies on the stated housing preferences of this group have already been conducted.

1.1.5. Housing preferences of people aged 55 years and older

Van Middelkoop and Boumeester (2014) state that each household has its own housing needs, these are dependent on the stage of the lifecycle that the household is in. Different household types therefore value the same qualities differently. One can conclude that the qualitative housing demand is dependent on the household type. As explained before, people aged 55 years and older can be divided into multiple household types and therefore it would be wrong to talk about them as one household type. However, the studies on their preferences for physical housing qualities, physical vicinity qualities, functional vicinity qualities and social vicinity qualities are mostly based on the whole group.

Regarding physical housing qualities, they generally need smaller houses than families because their

household is smaller. The demanded housing surface seems to become smaller as they get older (Blijie et al., 2009a). The 55+ households with more members or a higher income demand more rooms than the other 55+ households. When their health decreases, fewer rooms are demanded. Three rooms is the minimum amount for most senior households (Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, 2010).

Table 1.1. Housing and vicinity qualities.

Categories	Qualities
Physical housing qualities	- Energy performance coefficient (EPC) - Housing surface - Number of rooms - Availability of a garage - Availability of a garden - Building period - Type of dwelling
Physical vicinity qualities	- Proximity to public and recreational water - Proximity to public and greenery - Province - Rural/urban
Functional vicinity qualities	- Proximity to public transport - Proximity to the city centre - Proximity to Employment opportunities - Proximity to sport clubs - Proximity to sport facilities - Proximity to cultural facilities: - *museums* - *musical venues* - Supply of restaurants - Supply of cafes - Presence of a university
Social vicinity qualities	- Percentage of owner-occupied houses - Percentage of one-family houses - Percentage of immigrants - Social status score - Nuisance - Crime rates - Share of different housing types - Average income - Composition of the population

According to Blijie et al. (2009a), the preferred housing type is also dependent on their age. Most people are not interested in apartments until they are 65, whereas this is the most demanded housing type for people of 75 years and older. However, the Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (2010) states that most people already want to live in houses without stairs at an age younger than 60. This has to do with their mobility. The accessibility of houses is more important to people aged 55 years and older than other household types because their health is more likely to decrease.

An important physical vicinity quality is accessibility as well. Low and broad sidewalks and little traffic can improve the mobility of older people (Raad Volksgezondheid & Samenleving, 2020). Contradicting information on the locations where people aged 55 years and older want to live is found. According to Centraal Bureau voor de Statistiek (2020a) they move from urban to more rural locations. However, Doekhie et al. (2014) claim that they move from rural to more urban locations, to have greater access to shops, public transport, health care and other services.

From this, one can conclude that access to shops, public transport, health care and other services are important functional vicinity qualities. People aged 55 years and older often want these important facilities at

walking distance from their house (Medical Delta, 2013). This way, they are able to live independently for a longer period.

Three social vicinity qualities that are important for people aged 55 years and older are a safe neighbourhood, a mixed population and opportunities to meet. Safety is important for older people, as they are a vulnerable household group (Raad Volksgezondheid & Samenleving, 2020). According to Medical Delta (2013), a great number of them likes to live in a neighbourhood consisting of different household ages. However, some also see opportunities in living with households of the same age, to organize health care together in the future. Opportunities to meet can be created by functional or physical vicinity qualities like cafes, libraries, vegetable gardens or squares. But also by social initiatives like hiking or bible groups (Raad Volksgezondheid & Samenleving, 2020).

Not only housing and vicinity qualities and supply and demand influence the housing choices of people aged 55 years and older. Their personal situation can be important as well. The Centraal Bureau voor de statistiek (2020a) explains that living close to family and friends can be an important reason to prefer a house on a certain location. Other people want to move to their place of birth (Van Iersel, Leidelmeijer & Buys, 2009). Financial considerations can be of influence as well. It is possible to unlock equity by purchasing a cheaper house, renting cheaper or by renting instead of purchasing a house. The financial considerations that Hoekstra et al. (2018) mention are to supplement their pension, to support their children and to be able to adjust their house in the future when mobility decreases. However, these considerations can also be reached by making use of upcoming financial products like a sale- and lease-back construction, a reverse mortgage or home reversion (Hoekstra et al., 2018; Dillingh et al., 2017). These personal situations have to be taken into account during a study on housing preferences.

Qualities that are important for the housing choice of people aged 55 years and older are summarized in table 1.2. This table is not complete.

Table 1.2. Important housing qualities to people aged 55 years and older.

Categories	Qualities
Physical housing qualities	- Housing surface - Type of dwelling - Number of rooms - Accessibility
Physical vicinity qualities	- Accessibility - Rural/urban
Functional vicinity qualities	- Proximity to shops - Proximity to public transport - Proximity to health care - Proximity to other services
Social vicinity qualities	- Safe neighbourhood - Composition of the population - Opportunities to meet

1.1.6. Demographic, socio-cultural and economic developments

Demographic, socio-cultural and economic developments can influence the qualitative housing demand and consequently the supply (VROM-raad, 2009). A demographic change is the ageing in the Netherlands. People aged 55 years and older have a specific qualitative housing demand, which leads to adjustments to the housing market.

An example of a social-cultural trend is the stimulation of home-ownership. Homeownership has been stimulated in the Netherlands for the generation that is born after the second world war. Next to that, this generation is higher educated than the generation before and therefore had a better income. This has led to more homeowners on the housing market since 1985. At this point in time, most retired people have amortized their mortgage. Next to that, they have the AOW and good retirement payments. This has led to an increasing purchasing power for the new generation of older people. Because they have more money to spend, their demand for quality increases (Blijie et al., 2015).

Economic upturns and downturns influence the qualitative demand of potential housing purchasers as well. During a downturn, fewer people are looking for a more luxurious house, more people are looking for a house with one, two or three rooms and fewer people are looking for a one-family house (De Vries & Boelhouwer, 2006). Next to that, more people are willing to rent a house instead of buying it (Van der Heijden & Boelhouwer, 2018). But as explained before, the desire to move for older people often is not urgent. If the economy is in a downturn, they are less inclined to adjust their qualitative housing demand.

1.2. Problem statement

As explained before, ageing is a demographic development in the Netherlands that leads to an increasing amount of older households. Most people aged 55 years and older do not want to move or cannot find a house that meets their demand. This is expected to block the housing flow and increase the already existing mismatch on the housing market, which will lead to difficulties on the housing market for other household types. To give the other household types more opportunities on the housing market, houses for people aged 55 years and older need to be built. However, policy makers and housing developers often do not exactly know how to attract these households. Studies on their housing preferences have already been conducted. Next to that, studies on the general importance of different housing and vicinity qualities have been conducted. However, preferences can change over time and no studies on the importance of different housing and vicinity qualities according to the 55 years and older households have been conducted. Therefore this is the main goal of this research.

This research will answer the following question: What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands? To answer this question, first the 55+ group has to be defined. Existing data on why part of them wants to move and what their housing preferences are will be analyzed. After this, new data will be gathered and analyzed on the differences in housing preferences and the differences in considerations in housing choices for different age groups. With this information, the main question can be answered. The design of this research can be found in the conceptual scheme in figure 1.3.

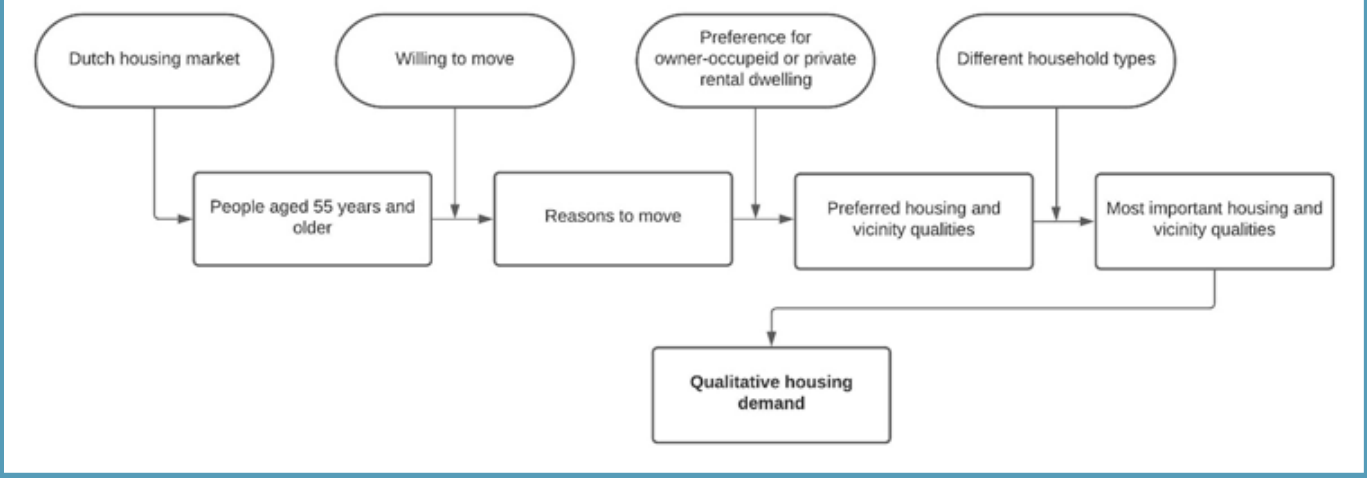

Figure 1.3. conceptual scheme thesis (own image).

1.3. Relevance

1.3.1. Scientific relevance

Research on housing and vicinity preferences has been conducted many times before. Examples are the hedonic studies that are already mentioned in the introduction. These are used to find housing and vicinity preferences and the importance of the individual preferences in the decision on purchasing a house. In those studies, no distinction is made between the preferences of different household types. Other studies do make this distinction, but cannot make statements about the importance of individual qualities. next to that, due to demographic, socio-cultural and economic developments, the preferences can be adjusted.

In this study, statements about the importance of the currently preferred qualities for different 55 years and older household types will be made. It is focused on households in the Netherlands. Also, the trade-offs that the household types make and their willingness to pay can be determined. These are outcomes that can complement and update other 'traditional' studies on housing preferences per household type.

1.3.2. Societal relevance

People aged 55 years and older have a qualitative housing demand. Developing companies build thousands of houses in the Netherlands every year to meet this demand. However, these houses often still do not meet the qualitative demand. This research can be used to define the qualitative 55+ demand in more detail, which should lead to more optimized constructions. If the housing supply for 55+ households in the Netherlands would be optimized, more people aged 55 years and older would move from their current house to a new house. This would start housing flows and would lead to an overall better match on the housing market. Providing housing for 55+ households therefore leads to improved housing for more household types.

Next to that, the research for the qualitative housing demand of 55+ households could lead to more focused municipal housing instruments. If the municipality wants to house this group on a certain location, it can require the housing qualities that the 55+ group prefers on that location. This leads to better elaboration of municipal policies, which should lead to better neighbourhoods.

1.4. Internship

The research is combined with an internship at Bouwfonds Property Development (BPD), the biggest urban area developer in the Netherlands. To be able to satisfy the qualitative housing demand, a research department at BPD is founded. This department is responsible for market analysis and thematic researches. In the light of the housing need for people aged 55 years and older, an internship position on the research department was available. Their experience in market researches and the possibility to utilize a respondent panel should improve the usability of the research outcome.

2. Methods

2.1. Research questions

The goal of this research is to analyze the current preferred housing and vicinity qualities for different Dutch 55+ household types and to make statements about the importance of those different qualities compared to each other. This can be used to optimize the newly built housing supply for people aged 55 years and older in the Netherlands and to stimulate the Dutch housing flow. For this, the following research question is composed:
What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands?
The fact that households aged 55 years or older cannot be treated as one household type is explained. This is taken into account in developing this research. To answer the main research question, four sub-questions have been determined:

Sub question 1: What are the characteristics of people aged 55 years and older on the Dutch housing market?
In this question, a demarcation of people aged 55 years and older will be made to define the target group of the study.

Sub question 2: What are motivations of people aged 55 years and older in the Netherlands to move?
Not every person aged 55 years and older is willing to move. On the contrary, most are not willing to move. Houses are developed for the people that are willing to move. Therefore these are the people whereupon this research is based. In this question, their reasons to move will be analyzed.

Sub question 3: What are the housing and vicinity preferences of Dutch people aged 55 years and older that are willing to move to a private rental or owner-occupied dwelling?
The houses where people aged 55 years and older that are willing to move are looking for will be discussed in this sub question. From this question onwards, the focus will be on people that are looking for a private rental or owner-occupied dwelling. These are the sectors on which BPD mainly focuses.

Sub question 4: Which Dutch 55 years and older subgroups that are willing to move to a private rental or owner-occupied dwelling can be distinguished?
To be able to make statements about housing preferences on a more detailed level, in this sub question interesting household groups will be distinguished.

Sub question 5: What are the most important housing and vicinity qualities for the different Dutch 55 years and older groups that are willing to move to a private rental or owner-occupied dwelling?
In the last sub question, the housing preferences for different household groups will be analyzed. The importance of certain housing and vicinity qualities per household type and their willingness to pay will be discussed.

2.2. Literature study

The research design consists of a qualitative and a quantitative part and therefore is a mixed-method design. The research consists of an extensive literature study, backed up by quantitative data, and a conjoint analysis. A literature study is already used to write the theoretical framework in the introduction. It will also be used to partly answer the first three sub-questions. Table 2.1 shows the sources that will be used per sub question. In total thirty sources will be used, of which seventeen specifically focus on the Netherlands. Twenty-four sources specifically focus on the main target group of this research.

The first two research questions focus on general physical and psychological characteristics of the target group. The way this is embedded in the Netherlands will be explained as well but will be of less importance. Especially the third sub question will focus on the Dutch situation, which is reflected in the choice of literature.

In the introduction, several housing qualities are already mentioned. However, lots of question remain unanswered. Table 2.2 gives an overview of topics that at least will be elaborated on in the literature study.

2.3. Quantitative data

The first three sub-questions will be backed up by already existing quantitative data. Most quantitative data will be derived from the Centraal Bureau voor de Statistiek (CBS) and Woononderzoek Nederland (WoON). The CBS provides data on the dutch population and societal issues. WoON is a dataset on personal characteristics, (former) housing characteristics and housing preferences of the Dutch society. Every three years, the Rijksoverheid surveys people aged eighteen years and older in the Netherlands. The most recent version of WoON dates from 2018. In this research, WoON will be weighted by households to get representative data on the household level of the whole

country, as normally one house is needed per household.

Table 2.1. Literature sources for the literature reviews.

Source	Dutch	55+	SQ1	SQ2	SQ3
Blijie et al. (2015)	■		■		
Blijie et al. (2009a)	■				■
Blijie et al. (2009b)	■		■	■	■
Broekmans (2019)	■	■			■
Centraal Bureau voor de Statistiek (2020a)	■	■		■	
Clark & Deurloo (2006)		■	■		
De Jong & Van Duin (2010)	■	■	■		
De Jong et al. (1995)		■		■	
De Jong et al. (2012)	■	■		■	
Dillingh et al. (2017)	■	■		■	
Figueroa Martínez et al. (2019)					■
Golant (2011)		■	■	■	
Hillcoat-Nallétamby & Ogg (2013)		■	■	■	■
Hansen & Gottschalk (2006)		■		■	
Hoekstra et al. (2018)		■	■	■	
Medical Delta (2013)	■	■			■
Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2019)	■				■
Nijkamp & Bosker (2020)	■	■			■
Pope & Kang (2010)		■		■	
Raad voor de Leefomgeving en Infrastructuur (2020)	■				■
Raad Volksgezondheid & Samenleving (2020)	■	■			■
Roy et al. (2018)		■		■	
Scharlach et al. (2011)		■	■		
Sixsmith & Sixsmith (2008)		■		■	
Smetcoren et al. (2015)		■	■	■	
Stuart-Fox et al. (2021)	■	■	■		■
Van Dam et al. (2013)	■	■	■	■	■
Van der Meer (2006)	■	■	■		
Vanleerberghe et al. (2017)		■	■		
Van Iersel et al. (2009)	■	■	■	■	■

2.4. Survey

In the next phase, the fourth and fifth sub question will be answered. It will consist of two parts: a traditional survey and a conjoint analysis. The people that are asked to fill in this survey are people in the Netherlands aged 55 years and older who are willing to move within five years to an owner-occupied or private rental house. This demarcation of the respondent group still leads to a heterogeneous group on which it is useful to compare the results. They will be contacted via an email by an external company. The survey therefore will be online and will fulfil the requirements of the AVG, the privacy laws of the European Union. The respondents are asked to fill in both parts of the survey.

2.4.1. Traditional

The survey will start with the traditional part. In this part, questions about the personal situation of the respondents will be asked. First, it has to be sure that the respondents belong to the target group. After this, questions will be asked that lead to a distinction between the different household groups. Then, questions about the personal living situation and housing preferences are asked. The last part of the survey will consist of a valuation of housing profiles, which can be used for a conjoint analysis. The traditional survey part in first instance will be used to answer the fourth research question, by comparing the traditional results of different subgroups. If lots of differences between two or more groups are found, these could be interesting to perform a conjoint analysis on. Next to that, the

traditional part will be used to compare the isolated qualitative preferences (traditional questions) to the combined qualitative preferences (conjoint questions).

Table 2.2. Housing qualities that are of importance for people aged 55 years and older, that will be elaborated in the literature study.

Quality	Why will this be elaborated?
Housing surface	People aged 55 years and older generally have different preferences regarding housing surface than other households. They tend to live smaller when they get older (Blijie et al., 2009a). Exact numbers on this are not mentioned yet.
Type of dwelling	Blijie et al. (2009a) and Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (2010) contradict on this topic. The goal is to find an unambiguous preference.
Number of rooms	The number of rooms that is desired by people aged 55 years and older depends on multiple characteristics (Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, 2010). The exact relation is not clear yet.
Accessibility	Accessibility of housing (Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, 2010) and vicinity (Raad volksgezondheid & Samenleving, 2020) is more important to people aged 55 years and older than other households, as they are more likely to become less mobile. It is not clear yet what the influence of accessibility on housing choice is.
Safe neighbourhood	Safety is an important quality for people aged 55 years and older (Raad volksgezondheid & Samenleving, 2020). However, the definition of safety is not clear.
Composition of the population	A part of the people aged 55 years and older wants to live between different household ages. However, another part sees advantages in living between households of the same age (Medical Delta, 2013). The real preference is not clear yet.
Opportunities to meet	Multiple vicinity qualities that stimulate meetings are mentioned (Raad Volksgezondheid & Samenleving, 2020). However, it is not clear which qualities are valued the most.
Rural/Urban	Centraal Bureau voor de Statistiek (2020a) and Doekhie et al. (2014) contradict on this topic. The goal is to find an unambiguous preference.
Proximity to vital services	Multiple sources (e.g. Medical Delta, 2013) agree that this is an important quality for people aged 55 years and older. However, it is not clear what the impact of this quality is for the housing choice.

2.4.2. Conjoint analysis

The fifth sub question will be answered by conducting a conjoint analysis. The conjoint analysis is used to find the trade-offs in housing qualities that (potential) housing purchasers or tenants make. It is based on stated preferences. In the conjoint analysis, qualities are called attributes. Attributes contain at least two attribute levels. An attribute level represents a possible value of the attribute (Molin, 2011). An example of an attribute is the surface of a house. Examples of corresponding attribute levels are 90 square meters and 100 square meters.

In the conjoint analysis, residential profiles have to be judged by respondents. A residential profile consists of a combination of attribute levels (Molin, 2011). The attributes and attribute levels will be determined after the literature study and in cooperation with BPD. The amount of profiles that have to be made is dependent on the number of attributes and attribute levels, which will be introduced in paragraph 6.5. Not every residential profile will be judged by every respondent. For every respondent, a selection of profiles is made. This means that by using more attribute levels, more respondents are needed. Therefore a maximum of three attribute levels for every attribute will be used. All residential profiles will contain attribute levels that are imaginable for the respondents. These will only

be described by text because images often show unrelated housing characteristics that can distract them from the essence of the attribute level (Boumeester et al., 2008).

The stated preferences can be found in three ways: by letting the respondents rate a selection of residential profiles, by asking the respondents to their preferred residential profile within sets of two residential profiles (Molin, 2011), or by asking within which of the two residential profiles the respondents would like to live. In this last method, an opt-out option is added, which means that the respondent can choose for none of the two options. The rating option provides the biggest amount of useful output (Boumeester et al., 2008), the ranking task is a better simulation of choices that are actually made on the housing market. The number of respondents that is needed for reliable results is lower in a conjoint analysis than in a traditional survey. This is because in a conjoint analysis, a series of responses is given by one respondent. Therefore, the number of observations increases compared to a traditional survey (Molin, 2011). Orme (2010) recommends to use at least 300 respondents in a conjoint measurement in the case of a large population. The target group in this research, people aged 55 years and older in the Netherlands who are willing to move within five years to an owner-occupied or medium rental house, can be indicated as a large population. However, if the goal is to compare the output of different household types, at least 200 respondents per household type are desired (Orme, 2010). The number of respondents needed, therefore is dependent on the number of household groups.

The result of a conjoint analysis is expressed in a part-worth utility for every attribute level. The part-worth utility represents how much the attribute level has influenced the total utility of a house if all other attribute levels remain constant. This information can be used for multiple purposes. It can be used to find trade-offs. Trade-offs can be found by comparing the utilities of two residential profiles in which one attribute differs in attribute level. Another purpose is determining the importance of the different attributes. This is possible by finding the range of the part-worth utilities of every attribute. Bigger ranges indicate a bigger variance of a certain attribute on the housing preference, which means higher importance in the choice. The willingness to pay for an attribute can be determined if the price is part of the residential profiles. based on its utility range, the attribute price per one part-worth utility can be determined. With this value, the willingness to pay for another utility level can be found (Boumeester et al., 2008).

2.4.2.1. Hierarchical information integration approach

It is plausible that the attributes will consist of physical housing qualities, physical vicinity qualities, functional vicinity qualities and social vicinity qualities. According to Vyvere et al. (2010), incorporating too many attributes leads to information overload and therefore the possibility that respondents lose interest and do not take all attributes into account during valuating profiles. This would make their choices less realistic (Molin & Timmermans, 2009). The hierarchical information integration approach can be used to prevent the overload of information and to find truthful preferences (Molin et al., 2000).

In a hierarchical information integration approach, the researcher cuts the full profile in smaller subprofiles, these are called the decision constructs (Molin et al., 2000). In this survey, the conjoint attributes will be divided into a housing qualities construct and a vicinity qualities construct. The respondents are asked to rate the decision constructs of two profiles each time, after which a bridging experiment takes place. In the bridging experiment, the full profiles are shown and the respondents are asked to do a ranking task: they have to indicate which of the two full profiles suits their preference better. In this bridging experiment, the decision constructs can be seen as new attributes. After analysing these two attributes, the complete utility function of all (original) attributes becomes clear (Molin & Timmermans, 2009; Vyvere et al., 2010). A disadvantage of this approach is the extra tasks the respondents have to perform. However, their tasks become less monotonous and due to the rating task, more information on the profiles is derived.

2.4.2.2. Multiple regression analysis

The data that will be collected with the rating task, will be analyzed by a multiple regression analysis. In such an analysis, the valuation of the profiles can be predicted by a linear combination of the attribute levels of that profile (Field, 2018). This can be denoted with the following formula:

$$U = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_i x_i + \varepsilon \quad (1)$$

In which U (the outcome variable), is the total utility for a combination of attribute levels of a predetermined housing profile, equal to the ratings given by the respondents, β_0 is the constant or intercept, β_i is the part-worth utility of present attribute level x_i (the predictor variable) and ε is the error term (Orme, 2010).

2.4.2.3. Multinomial logit analysis

The data that will be collected with the ranking task, will be analyzed by a multinomial logit analysis. The difference compared to the rating task is that it is not possible to observe the profile utilities directly (Molin, 2011). However, profiles can be compared to each other, which will happen in the analysis (Field, 2018). It is assumed that respondents prefer the profiles with the highest utilities. The utilities therefore can be determined based on the probability that a certain profile will be chosen (Molin, 2011; Rao, 2014). An example of a formula that is used for a multinomial logit analysis, in this case for the choice between profile 1 and 2, is shown below.

$$P(y_1) = \frac{e^{u_1}}{e^{u_1} + e^{u_2}} \quad (2)$$

In which $P(y_1)$ is the probability that profile 1 is chosen and u_x is the utility of profile x (Orme, 2010). The part-worth utilities in this formula are random estimates at first. Due to iterations of the calculations, the utilities become closer and closer to reality, until the correct utilities are found (Orme, 2010).

2.5. Data plan

The data that will be used for this thesis are literature, existing data sets and data from a survey. The data will be stored on the password-protected server of BPD to prevent loss of data. This also includes the progress of the report.

Wilkinson et al. (2016) have published FAIR guiding principles to stimulate data Findability, Accessibility, Interoperability and Reusability. This should lead to better reuse of data and knowledge integration. Following these principles, the public version of the thesis will be published on the TU Delft education repository after graduation. Next to that, a shorter version in Dutch will be published by BPD.

2.6. Ethical considerations

The survey is the research method in which contact with other persons takes place. The respondents will be contacted by an external company. The personal data of the sample is not known by BPD nor the writer of the research. No questions that could reveal the respondents' identities will be asked. Therefore the survey will be completely anonymous.

2.7. Research output

This research can be divided into four phases. The first phase, the preparation, will be concluded with this chapter. The second phase is focused on getting to know the target group, to be able to develop a survey. This phase will lead to three chapters, in which in every chapter one of the first three sub-questions will be elaborated by a literature review and quantitative data of mainly Centraal Bureau voor de Statistiek and WoON. The first sub question will be used to explain who the people aged 55 years and older are and why this is an important target group. The second sub question will explain what their reasons are to move. The third sub question will explain the general housing preferences of this group. These questions will mainly be textually be elaborated. However, tables and graphs will be used to support this information.

The third phase should answer the fourth and fifth sub-questions and will consist of three chapters. In the first chapter, the design of the survey will be explained. It will consist of an explanation of the goals, the chosen attributes, the chosen attribute levels, the chosen residential profiles, the chosen respondents and the number of respondents needed. The attributes will be based on the information that is found in the first three sub-questions. A table will be added to give an overview of these attributes. The actual residential profiles and survey questions will be added to the appendix. The second chapter of this phase will look at the sample and will focus on their willingness to pay and differences in housing preferences between different groups. The last chapter will be used for the conjoint analysis. It will contain a general outcome and an outcome per interesting subgroup. The information will be explained by tables and graphs that are produced in SPSS, Biogeme and excel and supporting textual elaboration.

The last phase consists of the conclusion & discussion and the reflection chapter. In the conclusion, the answer to the question 'What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands?' will be given by combining the conclusions of all chapters. The intention is to help housing developers in developing their program of requirements and marketing strategy for the different 55+ households in the Netherlands. However, it can also be used by governmental parties. Municipalities for example, can incorporate certain quality requirements to their policy instruments if they want to attract a certain 55+ household type that prefers those qualities to a neighbourhood. The reflection will be based on the process, results and personal development. The last phase will mainly by textually elaborated.

3. Characteristics of people aged 55 years and older

The question that will be answered in this chapter is: “What are the characteristics of people aged 55 years and older on the Dutch housing market?“. This will be done because these characteristics are important in understanding their future housing choices. The age of households is defined by the age of the oldest person in the household (Stuart-Fox et al., 2021) and therefore only one member of the household has to be 55+to become a 55+household.
The 55+household group is diverse in for example age cohorts, the composition of households and its mobility (Van Dam et al., 2013). However, in this chapter the general characteristics of and trends for the people over 55 will be explained. The chapter will start with a prognosis of the development of people over 55 in the Netherlands. After this, their current demographic trends will be elaborated more in-depth. At last, the living situation of this group will be discussed.

3.1. Ageing in the Dutch population

In 2020, 17.41 million people lived in the Netherlands. 5.76 million of those had an age of 55 years or older. This is 33,9% of the total amount (Centraal Bureau voor de Statistiek, 2021a). In the past 20 years, the share of people aged 55 years and older has increased by 40,5% (Centraal Bureau voor de Statistiek, 2021a). The increase in the share of elderly people in a country is called ageing. It is expected that the total amount of people in the Netherlands will increase by 9,4% until 2040 and the total amount of 55+people by 19,6% (ABF Research, 2020). This means that the share of 55+people in the Netherlands will increase to 36,2%. The (expected) development of people in the Netherlands is shown in figure 3.1.

In 2020, 7.98 million households lived in the Netherlands. 3.72 million of those were 55+households (Centraal Bureau voor de Statistiek, 2021a). This is 46,5% of the total amount of households. The percentage of 55+households exceeds the percentage of 55+people. An explanation for this is that the household age is defined by the oldest member of the household. Therefore under-55 people can also be part of the 55+households (Stuart-Fox et al., 2021) Next to that, the 55+ households are on average smaller than 55- households.

What stands out is that the total amount of households in the Netherlands is expected to increase by ‘only’ 13,2% until 2040, while the total amount of 55+ households in the Netherlands is expected to increase by 24,3% until 2040 (ABF Research, 2020). By 2029, the share of 55+ households is expected to be over 50% of the total households. The (expected) development of households in the Netherlands is shown in figure 3.2. The increase of 55+ one-person households can be an explanation for this (Van Dam et al., 2013). The increase of 55+ one-person households is steeper than the total increase. Therefore the average household size of 55+ households decreases faster than the average size of all households. this will be discussed further on in this chapter.

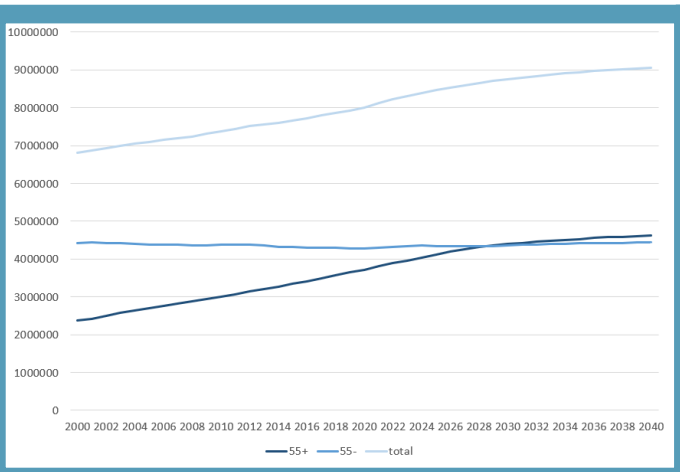

Figure 3.1. Amount of people in the Netherlands (edited from: Centraal Bureau voor de Statistiek, 2021a & ABF Research, 2020).

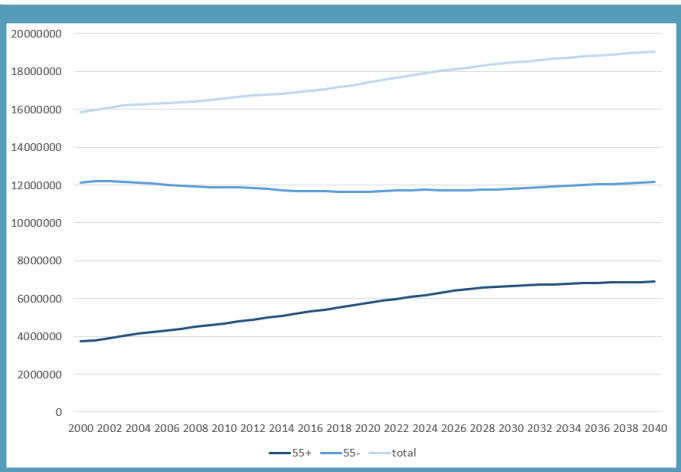

Figure 3.2. Amount of households in the Netherlands (edited from: Centraal Bureau voor de Statistiek, 2021a & ABF Research, 2020).

Ageing is not equally distributed throughout the country. Looking at the first level NUTS in 2020, the highest share of 55+ people could be found in the south of the country (36,0%). However, the increase in the share of the 55+ people in the next 20 years is expected to be the lowest in this region (7,9%) and the highest in the north (12,9%). The north therefore is expected to be the region with the highest share of 55+ people in 2040. This is also the only region in which a decrease in population is expected. More information can be found in table 3.1 (ABF Research, 2020).

A comparable situation can be found in the development of 55+ households. However, the increase of households is expected to take place in every region. The percentages for the 55+ household development can be found in table 3.2 (ABF Research, 2020).

Van der Meer (2006) explains that fertility and mortality decline are two reasons for ageing in the Netherlands. Within the Netherlands, she notices differences in the extent of ageing between different regions

Table 3.1. Developments in 55+ people from 2020 to 2040. (Edited from: ABF Research, 2020).

	North	East	West	South
Share of 55+ people in 2020	35,6%	33,2%	31,2%	36,0%
Share of 55+ people in 2040	40,3%	37,4%	33,9%	38,8%
Increase in share of 55+ people 2020-2040	12,9%	12,7%	8,6%	7,9%
Increase in amount of 55+ people 2020-2040	10,5%	20,4%	24,9%	12,7%

Table 3.2. Developments in 55+ households from 2020 to 2040. (Edited from: ABF Research, 2020).

	North	East	West	South
Share of 55+ households in 2020	48.6%	47,5%	44,3%	49,5%
Share of 55+ households in 2040	54,2%	53,2%	48,5%	53,7%
Increase in share of 55+ households (2020-2040)	11,5%	12,0%	9,5%	8,5%
Increase in amount of 55+ households (2020-2040)	14,7%	24,7%	28,8%	17,3%

as well. One of the explanations Van der Meer (2006) gives for this phenomenon is the differences in fertility and mortality rate between regions, mostly caused by demographic, socioeconomic and cultural differences. Trends that relate to this are that couples leave big cities when they get children, that people with lower social status have lower life expectancies and that the ideal family size is dependent on culture (Van der Meer, 2006). Examples that confirm this are that newly built neighbourhoods outside big cities are mostly inhabited by young people. Places with a lot of newly built neighbourhoods are for example Flevoland, Pijnacker-Nootdorp and Houten. Another example is that places in the biblebelt, where a lot of reformed Christians live, are relatively young because the fertility rate is relatively high (De Jong & Van Duin, 2010).

Another explanation Van der Meer (2006) gives for the differences in the share of 55+ people between regions is migration within the Netherlands. According to her, children do barely migrate until they are 15, except for the period right after they were born. The migration is high for the 15-30 years old group, as children leave their parental house, and declines after that until the retirement age is reached.

Net migration is the number of people that settles in, minus the number of people that leaves a certain region within the Netherlands. The net migration in the years 2015 up to 2019 can be found in table 3.3. According to Van der Meer (2006), young adults move to urban areas to study or work, of which most to the Randstad. After their socioeconomic status increases, they tend to move back to more rural regions. The search for more qualitative houses and spacious houses when starting a family accelerates this movement.

Table 3.3 therefore shows no surprising results. The north region is not only facing population decline but has also a negative migration balance for all age groups. This is particularly true among the younger groups of the population. The net migration for the 15-30 years old group is negative for every region but the west region, because of its study and job opportunities.

In contrast, families and older people are leaving the west region, possibly due to the increasing costs of living. The eastern and southern regions have been profiting from this trend.
Known prosperous municipalities like Wassenaar, Laren and Bloemendaal are strongly ageing municipalities at this moment. This does not mean that these municipalities are more attractive, but this has to do with the housing choices that the inhabitants made in the past. (Van Dam et al., 2013). The fact that these three municipalities have the most expensive housing prices in the Netherlands (Centraal Bureau voor de Statistiek, 2020f), also makes it hard for young people to enter his market. The big cities and student cities like Delft, Groningen and Maastricht will stay relatively young, with Utrecht expected to be the least aged municipality in the Netherlands in 2040 (Van Dam et al., 2013). Figure 3.3. gives an impression of the ageing on municipality level.

Table 3.3. Net migration 2015 up to 2019. (Edited from: Centraal Bureau voor de Statistiek, 2021a).

	North	East	West	South
0-15 years old	-17.185	14.560	-3.540	6165
15-30 years old	-28.550	-12.279	54.277	-13.448
30-65 years old	-9.332	20.655	-19.767	8.444
65 or more years old	-65	3.674	-4.020	411
Total	-55.132	26.610	26.950	1.572

3.2. Household composition

The previous section has mostly focused on the number of 55 years or older people and households. This section will elaborate more on the composition of those households. Table 3.4 makes a distinction between the household types couple without children at home, singles without children at home, one-parent and family households in 2000 and

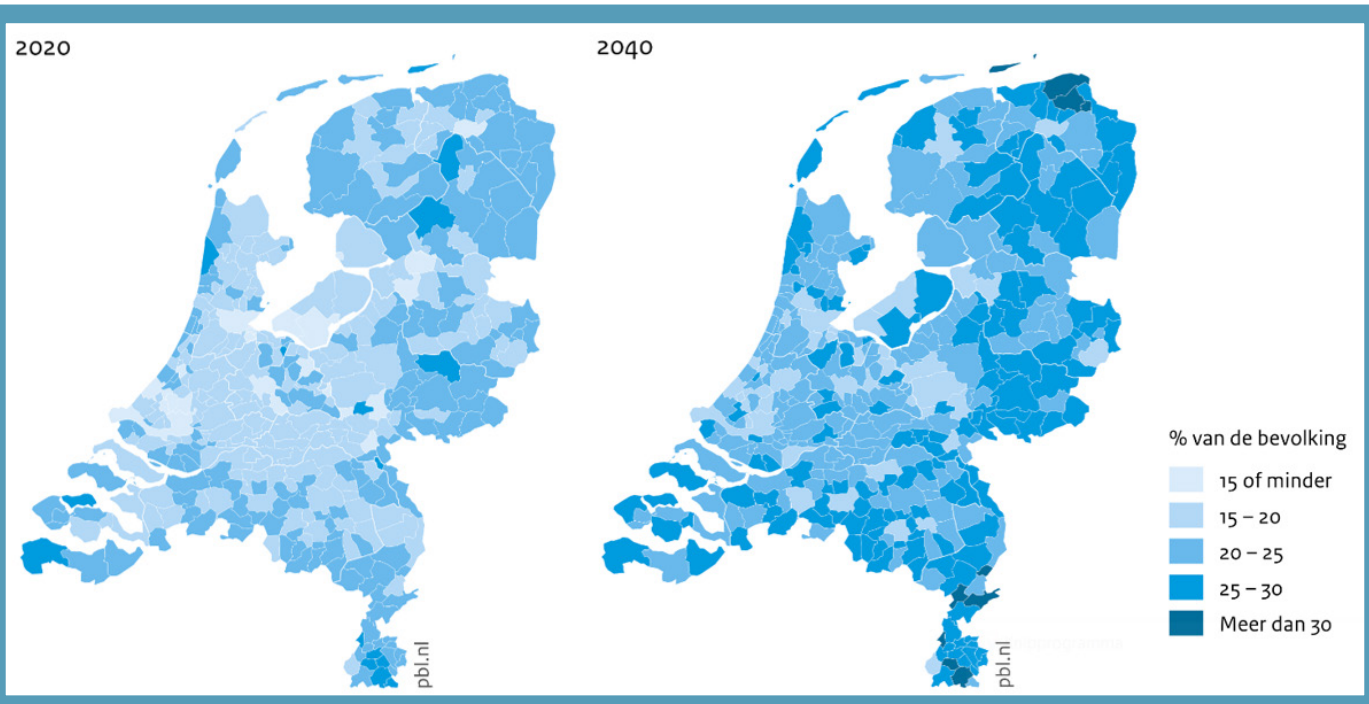

Figure 3.3. The share of people that have reached the AOW-age on municipality level in 2020 and 2040 (Planbureau voor de Leefomgeving, 2019).

2020. When zooming out, one can look at the households consisting of a couple (couples without children at home and families). Noteworthy is that the share of 55-64 couples has decreased, whereas the share of 65+ couples has increased.

The decrease in the share of couples is also noticeable in all age groups below 65, because of ongoing individualization (Blijie et al., 2015). However, there are logical explanations for the increase in 65+ couple households. In most couples, men are older than women, whereas men have a lower life expectancy. The life expectancy of both men and women has increased. However, the expectancy of men has increased more. Therefore, couples become older and the average widow period decreases. (Blijie et al., 2015; Van Iersel et al., 2009) Next to that, due to deinstitutionalization fewer couples are separated from each other (Van Iersel et al., 2009). The term deinstitutionalization will be elaborated further on in this chapter. However, because the share of households aged 65 and younger is decreasing, this trend is also expected for the 65+ couple households in the future (Van Dam et al., 2013).

Another thing that is striking is the increasing share of children living at home in the 55-64 group. Multiple trends can explain this increase. In 1980, 69.8% of the newly born children had a mother with an age between 18 and 25 and only 6,0% had an age of thirty or more. The average age was 27,5. The age when childbirth was given has been increased since then (Centraal Bureau voor de Statistiek, 2020b). However, the amount of childless women has increased as well. (Centraal Bureau voor de Statistiek, 2020c). Next to that, the age at which children leave their parental house became higher (Centraal Bureau voor de Statistiek, 2020d). Thus, the amount of 55+ households with children is expected to remain at the higher level.

Table 3.4. Housing compositions in 2000 and 2020 (Edited from: Centraal Bureau voor de Statistiek, 2020e).

	Couple without children		Single without children		One-parent		Family		n x1000 =	
	2000	2020	2000	2020	2000	2020	2000	2020	2000	2020
55-64 years old	51,1%	35,5%	25,9%	31,7%	3,7%	7,0%	19,3%	25,8%	947	1454
65-74 years old	52,1%	54,5%	38,9%	37,4%	3,1%	2,3%	5,9%	5,8%	777	1237
75 years old+	32,2%	40,1%	62,0%	55,7%	3,8%	2,5%	1,9%	1,7%	658	1027
total	47,9%	44,6%	38,0%	37,7%	3,4%	4,3%	10,7%	13,4%	2381	3719

3.3. Education

The 55+ group nowadays in general is different from the 55+ group in the past. One of the current trends is the increase in education level. In the past, the overall population was lower educated and mainly women did not have education at all or only went to primary school (Van Iersel et al., 2009). Before 1955, one-third of all men and even half of all woman only had primary education. This changed during the sixties and seventies when higher education became better accessible during the economic upturn. The generation as a whole became higher educated and this led to the biggest changes for women.

The consequences can be observed while comparing the degree of education between 2005 and 2020. This comparison is made in table 3.5. In total, the share of lower educated people is decreasing and the share of medium and higher educated people is increasing. The influence of women in these changes in every education level is higher than the influence of men.

The educational level influences the behaviour of 55+ people. Higher education generally leads to higher income and better pensions. Therefore the new generation of 55+ people is more prosperous than former generations (Van Dam et al., 2013; Van iersel et al., 2009). additionally, higher educated people stay healthy and vital for a longer time. Therefore 55+ people are able to live independently until an older age than former generations (Van Dam et al., 2013).

Table 3.5. The educational level of the 55+ population in the Netherlands (Edited from: Centraal Bureau voor de Statistiek, 2021b).

	2005			**2020**			**Increase**		
	Man	Woman	Total	Man	Woman	Total	Man	Woman	Total
Lower Educated	40,1%	64,0%	52,9%	32,3%	48,3%	40,6%	-19,5%	-24,6%	-23,3%
Medium educated	36,2%	24,5%	29,9%	37,0%	31,3%	34,1%	2,0%	27,9%	13,7%
Higher educated	23,6%	11,4%	17,1%	30,8%	20,4%	25,4%	30,1%	78,1%	48,1%

3.4. Income

The fact that more education leads to higher incomes and better pensions is confirmed by data of the CBS. The division of 55+ people in the income deciles of the Netherlands in 2011 and 2018, the oldest and newest data available, can be found in table 3.6. This table shows that the share of 55+ people in the low deciles has declined and the share in the higher deciles has increased. This does not mean that income increases when getting older. In general, older people have a decrease in income, especially after the retirement age. However, their financial starting point is better than it has been in the past and pensions have been improved (Van Iersel et al., 2009). This is stimulated by a higher rate of working women and better additional pensions (Van Dam et al., 2013).

Table 3.6. The division of 55+ people within the income deciles of the Netherlands (Edited from: Centraal Bureau voor de Statistiek, 2021c).

Decile	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
2011	3,5%	14,1%	14,4%	13,2%	11,2%	10,2%	8,9%	8,1%	8,1%	8,3%
2018	3,1%	13,3%	14,0%	12,7%	11,9%	10,3%	9,3%	8,7%	8,4%	8,4%
Increase or decrease	-	-	-	-	+	+	+	+	+	+

Figure 3.4 confirms that incomes decrease in the older age cohorts. This figure shows the share of different ages within the household disposable income quintiles of the Netherlands in 2019. The first age group (55-64) often is still part of the working population and therefore has a proper income. This is not the case for most people in the older age cohorts. However, the people in the age cohort 65-74 often have a good additional pension and therefore are more prosperous than the people in the oldest age cohorts (Stuart-fox et al., 2021). Van Dam et al. (2013) claim that the average disposable income decreases by €5.000 in the period between retirement and reaching the age of 75. They expect this period to shift to an older age, as people retire increasingly later. Partly because the law forces them to, but also because people want to keep working until an older age.

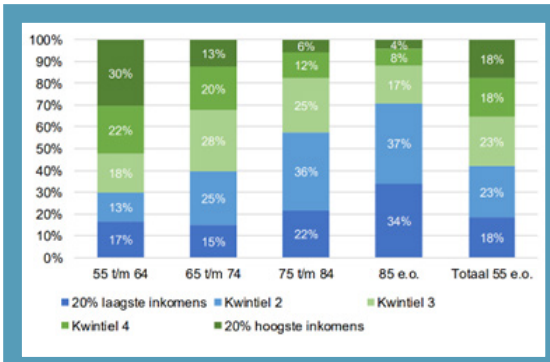

Figure 3.4. The division of 55+ households within the disposable income quintiles of the Netherlands in 2019 (Stuart-Fox et al., 2021).

The composition of the households also has a direct effect on the household income (Van Dam et al., 2013). The amount of one-person households increases with age, as the mortality rate increases with age as well. The shift from a two-person to one-person household goes with a drop in income. This is an explanation for the lower incomes in higher age cohorts as well.

3.5. Equity

The current 55+ households not only have more income, but they also have more equity than previous generations. Owning a house is the most common reason for the good financial position of these people (Van Dam et al., 2013) and financial autonomy is important to them (Hoekstra et al., 2018). The amount of homeowners is increasing. This is also the case for 55+ people. In 2012 54,7% of the 55+ households had purchased their house (WoON, 2012). In 2018, this number had increased to 57,8% (WoON, 2018).

Housing prices have strongly increased since the nineties. A lot of the 55+ aged households already lived in their house during that time. This situation creates a discrepancy between mortgage values and current market values. This has led to an increase in equity and increases the financial inequality between homeowners and tenants (Blijie et al., 2009b). Van Dam et al., (2013) also state that homeowners are more prosperous than tenants. Much of the older home-owning households have already paid off (most of) their mortgage. Therefore, the net monthly costs of 65+ tenant household are higher than the monthly costs for 65+ homeowner households (Blijie et al., 2015). As most 55plussers own a house and had an increase in equity, the overall equity has increased. Table 3.7 shows the housing equity for the different household ages in 2015. However, the amount of households that have paid off their entire mortgage is expected to decrease due to the introduction of interest-only mortgages (Van Dam et al., 2013).

Table 3.7. Equity in dwelling in 2015 per age group (Edited from: Centraal Burea voor de Statisiek, 2018).

	55-64	65-74	75+	Total 55+	Total NL
Value dwelling x1000	€264	€272	€270	€268	€249
Equity in dwelling x1000	€116	€193	€235	€167	€95
LTV	0,56	0,29	0,13	0,38	0,62

3.6. Mobility

As people get older, their physical health decreases, which leads to a decline in mobility. Thence, in 41,8% of the 55+ households, at least one person experience limitations in daily activities. As expected, the share of people that experience limitations increases with age. This is shown in table 3.8. Examples of limitations are from walking the stairs, to moving on the same floor level, to using sanitary facilities, to independently eating (Stuart-Fox et al., 2021).

Not every person will ever experience physical limitations and the age at which physical limitations starts differs per person and cannot be predicted. Fact is that the average age at which physical limitations start is rising (Van Dam et al., 2013). Van Dam et al. (2013) mention two reasons that support this observation. Labor has become less physically exhaustive, which is why people stay vital until an older age. Besides that, health care has improved. That is why the physical situation of the less healthy people can be kept on a higher level.

Looking at a greater scale, the current 55+ people are able to travel easier than past generations. More people have gotten a drivers license and are car owner (Van Dam et al. 2013).

Altogether, this has led to the fact that when 55-64 years old people move, they often tend to not take a possibly declining mobility into account. Rather, they look for quality improvement (Stuart-Fox et al., 2021).

Table 3.8. The degree to which households of different age groups are limited in daily activities (Edited from: WoON, 2018).

	55-64	65-74	75+	Total 55+
Severely limited	7,6%	7,9%	15,4%	9,8%
Limited, but not severely	32,9%	39,1%	48,5%	39,2%
Not limited	59,5%	53,0%	36,1%	51,0%
n x1000 =	1399	1171	949	3519

3.7. Current housing

Figure 3.5 shows the division of housing ownership and housing type for different age groups above 55. The share of owner-occupied houses is biggest in the youngest age group and becomes smaller in every subsequent age group. The share of rented houses increases with age. This is true for both social and private rentals. (Stuart-Fox et al., 2021). However, the share of rental houses is smaller than for previous generations in all age groups (Van Iersel et al., 2009). This has to do with the stimulation of home-ownership, which is introduced in paragraph 1.1.6.

In general, people in rental houses have a lower social status than people in owner-occupied houses. As explained before, people with lower social status have a lower life expectancy. That is why it is expected that the share of rental houses decreases in the older age groups (Van Iersel et al., 2009). This is contradictory to what Stuart-Fox et al. (2021) found. Blijie et al. (2015) explain that relatively more people with mobility problems live in rental houses compared to owner-occupied houses. Therefore the supply of rental housing that is suitable for elderly people is also higher than the same supply of owner-occupied housing. This is one of the reasons that older people more often swap their owner-occupied house for a rental house and the total share of rental houses increases.

As can be seen from figure 3.6, three-quarters of the people aged 55-64 live in an one-family house. Until the age group 85+, the majority lives in this housing type. After this, the majority lives in multiple-family houses. Once again, an explanation for this phenomenon is decreasing mobility. After mobility decreases, people prefer to

live in a house without stairs. The age groups between 55 en 85 live in one-family house more often then previous generations, as their overall prosperity and mobility has increased (Van Dam et al., 2013).

What stands out from figure 3.6 is that people in older age groups live smaller than the people in younger age groups. This phenomenon significantly takes place from the 75+ age group. This is partly because the average size of the households decreases as households get older, due to children moving out or the passings of household members. This means that the households need less space and move to smaller houses. However, moving houses is not the only reason. The oldest generation has always lived in smaller houses than the new generations live (Clark & Deurloo, 2006).

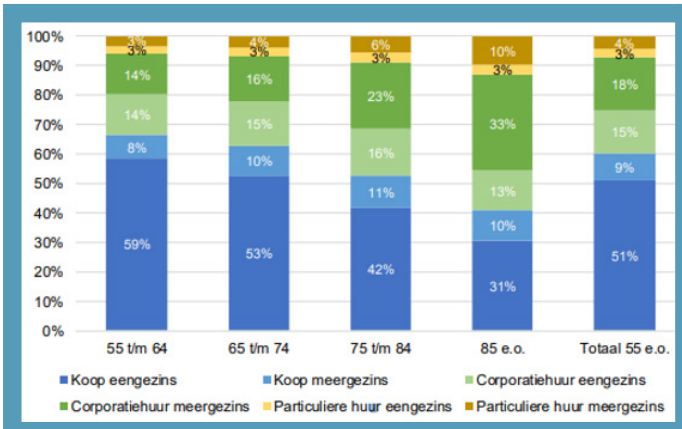

Figure 3.5. Housing ownership and type in 2019 (Stuart-Fox et al., 2021).

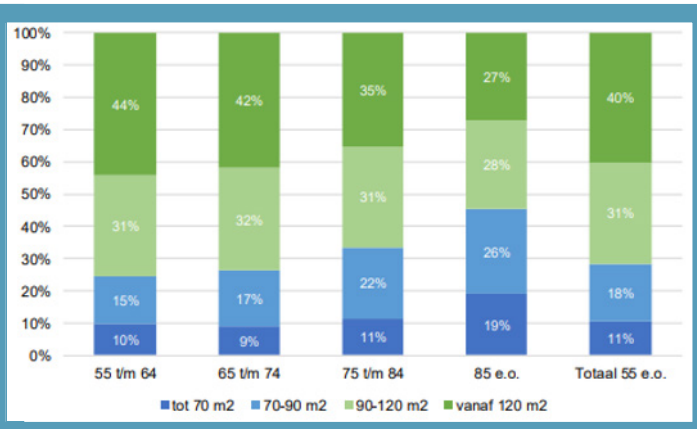

Figure 3.6. Housing size per age group (Stuart-Fox et al., 2021).

3.8. Deinstitutionalization

Deinstitutionalization is the aim to let people live independently for a longer time and only let them move to a nursing home institute if absolutely necessary. This is desired by elderly people and can add quality to their lives (Vanleerberghe et al., 2017). Independency, financial resources and the home and neighbourhood can be positively influenced by the deinstitutionalization policy, which leads to ageing in place (Sharlach et al., 2011). According to Sharlach et al. (2011), ageing in place means that people remain to live independently in familiar environments. The precise definition is debatable, but for the sake of consistency, this definition will be used.

Because deinstitutionalization is cost-effective as well, it is supported by many governments (Vanleerberghe et al., 2017). This is also the case in the Netherlands. In this country, it becomes harder to get an indication to get into a nursing home. Even when people have (minor) physical disabilities, they are expected to live independently. This leads to adjustments in the housing requirements for those people (Blijie et al., 2015). The government therefore tries to stimulate home care (Van Dam et al., 2013). The share of people that live independently has increased for every age. The higher the age, the higher the increase in independence. Figure 3.7 shows that it is expected that the share of people that moves to institutions further decreases.

It is not only the governmental policy that has led to the higher independence rate. People live more healthy years and have become more self-reliant. This has to do with the growing prosperity. The less prosperous part of the population has more physical disabilities. Therefore their chance of moving to a nursing home is still high (Stuart-Fox et al., 2021). But living independently also has its downsides. Research shows an increase in the levels of depression and a deterioration of the physical condition of older people due to loneliness (Vanleerberghe et al., 2017).

Ageing in place does not mean that people have to stay in the house they already live in. They can also move to another, more suitable, house in a familiar environment. In practice, this does not happen a lot.

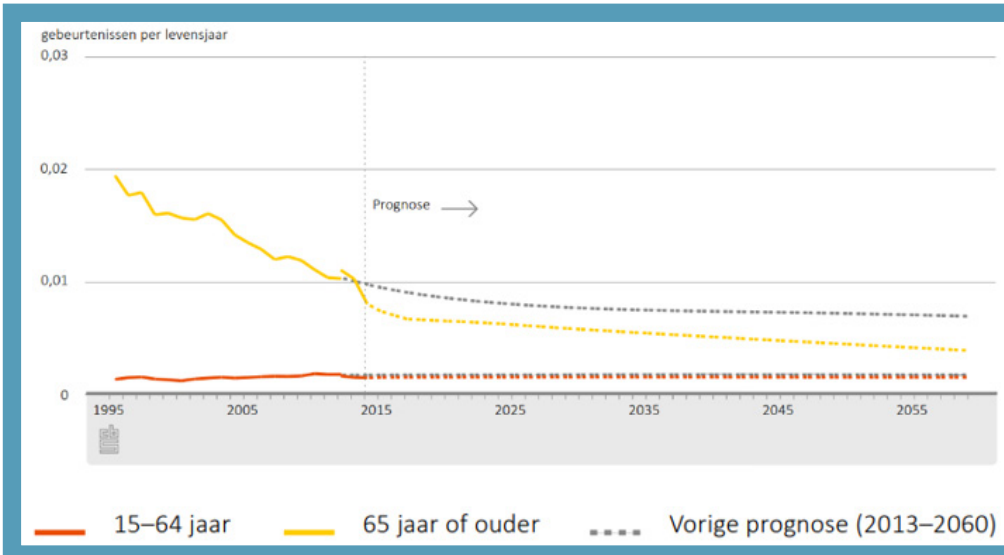

Figure 3.7. The frequency of moving houses to institutions (Van Duin et al., 2016).

3.9. Low willingness to move

People aged 55 and over do not change house often. Figure 3.8 shows the share of people that have moved in per year in the past ten years for multiple age groups. What stands out is that the share of people that move is highest for the <55 group. The share for the three age groups from 55 to 85 is approximately the same and between 4% to 5% in 2019. For the 85+ group, this is considerably higher: about 10%. This is for instance thanks to the number of people that move to nursing homes (Stuart-Fox, 2021).

Van Dam et al. (2013) recognize this trend and also see a little peek at the retirement age. They expect the share of 55+ household moves to decrease in the future because the 55+ people are homeowners more often. Multiple explanations for this low share are given by Wiseman (1980), Smetcoren et al. (2015), Hillcoat-Nallétamby & Ogg (2013), Van der Meer (2006) and Golant (2011).

According to Wiseman (1980), everyone is a potential mover and reevaluates their current housing situation continuously. They evaluate how their needs, desires and resources, but also market conditions relate to possible new situations. The consideration to move reduces by an increasing age. Smetcoren et al. (2015) state that a big difference between 55+ people and younger people is that urge for an improvement in the residential situation is less important for the 55+-people. Additionally, at this age there are fewer events that may lead to necessary moves, like a new job or family expansion.

The most named reason for the low share of moves for 55+ people is the emotional attachment to their house and its vicinity. In general, people get more satisfied with their house and all characteristics of its vicinity as they get older (Hillcoat-Nallétamby & Ogg, 2013), even if negative experiences have taken place (Van der Meer, 2006). This is also confimerd by Golant (2011). Golant explains that most older people have lived in their house for a long time and have also lived in multiple houses and vicinities before that. Altogether, this has led to a lot of memories that shape how these people feel about their current situation. Negative aspects of their current living situations are disguised by the positive memories of their past (Golant, 2011). People would have to start all over if they would move. If people have recent experiences with successful moves, this would stimulate the decision to move again. However, the longer the people live at the same address, the more they prefer their long-term stability (Wiseman, 1980).

Furthermore, people that are getting older and are becoming more frail value the presence of familiarity (Golant, 2011). This can be achieved on two levels, on a locational and on a social level. A familiar place makes people feel safe and confident. In such a place, people are able to continue their daily activities, even when their mobility declines (Golant, 2011; HIllcoat-Nallétamby & Ogg, 2013). Social contacts in turn, can help the people for whom the familiar place is not enough to continue all daily activities. It is harder to ask neighbours for help that one is not familiar with (Van der Meer, 2006).

Lastly, moving is seen as an act that asks for a lot of physical and mental labour. For people who are not physically stable anymore, external help is needed. This can lead to negative emotional experiences and stress (Golant, 2011) and can prevent 55+ people from moving.

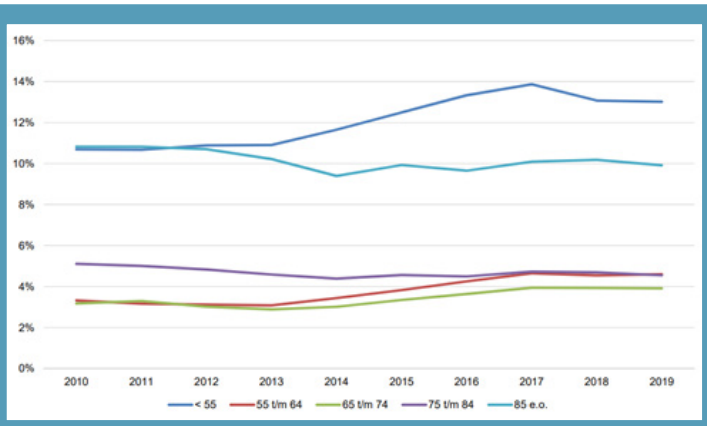

Figure 3.8. Share of the population that is moved per year for multiple age groups (Stuart-Fox, 2021).

3.10. Conclusion

In this chapter, the 55+ households are briefly introduced. As explained, the share and amount of people and households aged 55 years and older are all expected to increase. Half of the households will be 55+ households in 2029. As the group is so big, it is not surprising that it not only has really different characteristics compared to previous generations but also has really different characteristics within the current generation.

Compared to previous generations, relatively more one-person, one-parent and children containing households exist. This is especially the case in the youngest age group. The current generation has a higher income, which decreases a little in the older age groups, and more home-owners and housing equity. For housing owners, the housing equity increases with age. The amount and share of housing owners have increased compared to previous generations. The current generation also stays mobile and lives independently for a longer period. Different household types can be composed based on those characteristics: age, household composition, income, equity and mobility.

The focus in this chapter was on the total 55+ group. A great part of them does not want to move because they are attached to their current dwelling. The remainder of this research will only focus on the part that does want to move. To start with, in the next chapter their reason to be willing to move will be explained.

4. Willingness to move

As explained in the previous chapter, a lot of people that are aged 55 years or older are emotionally attached to their current house and have lived there for a long time. They move considerably less than younger persons. However, part of them does move or has a desire to do so. The reasons for their willingness to move will be discussed in this chapter. It answers the question 'What are motivations of people aged 55 years and older in the Netherlands to move?'.

In WoON (2018), the biggest housing market survey in the Netherlands that is held every three years, people were asked whether they wanted to move house within the next two years. In the Netherlands, 62,7% of the people say they absolutely do not want to move within two years. As expected, the share of 55+ people that do not want to move is larger. Table 4.1 shows that the willingness to move decreases with age. Next to that, the desire to move for older people is less urgent. This is why the part of the 55+ years old people that are willing to move and actually moves, is smaller than the part of people that are younger than 55 that are willing to move and actually moves (Centraal Bureau voor de Statistiek, 2020a).

Table 4.1. Answers to the question 'Do you want to move in the next two years' of people that are 55 years or older in the Netherlands (Edited from: WoON, 2018).

	55-64	65-74	75+	Total 55+
Absolutely not	69,8%	72,9%	82,9%	74,3%
Possibly, maybe	21,8%	20,2%	12,3%	18,7%
I would like to, but cannot find something suitable	3,3%	2,7%	1,9%	2,7%
Definitely	3,8%	2,9%	2,1%	3,1%
I have already found something	1,3%	1,2%	0,8%	1,1%
n x1000 =	1399	1171	949	3519

A broad range of reasons to move can be found in literature. Roy et al. (2018) have reviewed 86 studies on reasons to move and have made an overview of the reasons. These are divided in six main dimensions: the social dimension, the built and natural environment dimension, the time and space-time dimension, the economic dimension, the socioeconomic and health dimension and the psychological and psychosocial dimension. According to Roy et al. (2018), understanding the reasons to move is hard, as it is always a combination of reasons, some unknowingly, that leads to the desire to move.

In WoON (2018) respondents that were inclined to move were also asked for their most important reason for this. Especially the current dwelling and vicinity (built and natural environment dimension), health/need for care (socioeconomic and health dimension), financial reasons (economic dimension) and living closer to family (social dimension) were named as the most important reasons. The complete division can be found in figure 4.1. According to Smetcoren et al. (2017), people relocate more as their health decreases. Data of WoON (2018) confirms this. Health/need for care is the only reason that is mentioned more often as people get older.

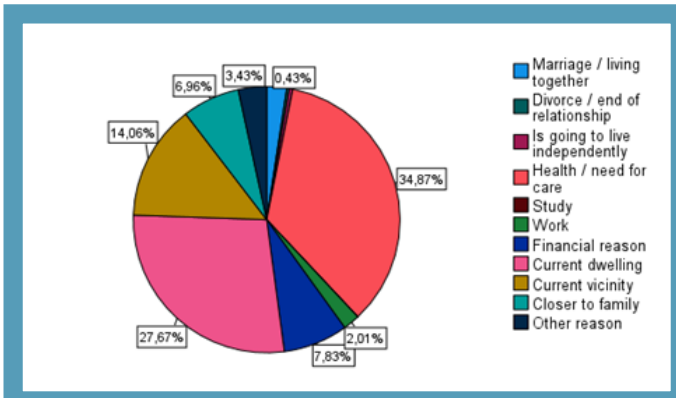

Figure 4.1. The most important reason for people aged 55 and older to be inclined to move (Edited from: WoON, 2018).

The remainder of this chapter will elaborate more on important reasons to move for people aged 55 and over. It focuses on life events, unsatisfying housing and vicinity characteristics and personal reasons. The most important reasons that are found in WoON (2018) are subdivided over these categories.

4.1. Life events

Although 55+ years old people that are willing to move have a low urge to do so, relatively many people move whilst they did not plan to. The share of unplanned moves increases with age. For the 75+ age group, two out of three moves were not planned. They took place (Van Dam et al., 2013) due to life events, sometimes unexpected. Unexpected moves are mostly because of health decrease and sometimes because of changing household composition, although children moving out is an expected household change. Retirement is another example of an expected life event (Golant, 2011; Smetcoren et al., 2017). These three examples will shortly be explained.

4.1.1. Mobility decrease

For 40,6% of the people aged 55 years or older, health is one of the reasons to be willing to move. For 83,7% of them, it is the most important reason (WoON, 2018). The share of people that name this reason and the share of people

that says it is the most important reason both increase by age, as shown in table 4.2. However, over the years these percentages have been decreasing due to earlier moves to suitable dwellings and due to deinstitutionalization (Van Iersel et al., 2009).

Health and the need for care as a reason to move is mostly a precaution to prevent an unexpected life event (Van iersel et al., 2009). According to Sixsmith & Sixsmith (2008), older people are aware that some characteristics of their living environment can become problematic in daily activities when mobility decreases. Problems with daily activities can lead to social isolation. Therefore they do not want to wait until this takes place.

Table 4.2. The share of households for whom health/need for care is one of the reasons they desire to move (Edited from: WoON, 2018).

	55-64	65-74	75+	Total 55+
Most important reason	16,9%	41,9%	65,8%	34,9%
One of the reasons	21,6%	48,1%	70,9%	40,6%
Most important reason if it is one of the reasons	78,2%	87,1%	92,8%	83,7%
n x1000 =	390	307	169	929

Some people do not wish to move because they are satisfied with their current living situation. However, if acute illness takes place, situations change and moving can be necessary (Smetcoren et al., 2017; Wiseman, 1980). This realization often occurs when once taken-for-granted tasks become difficult or undoable and parts of the house become unusable. The neighbourhood can become unusable as well because of characteristics like too small or high pavements and lack of amenities. This makes people feel vulnerable and helpless (Golant, 2011). If it is not possible to upgrade their house to a more suitable place, it can lead to social exclusion, isolation and fear. In cases like this, moving would be the best option (Sixsmith & Sixsmith, 2008).

4.1.2. Change in household composition

The household composition can change in multiple ways. In the younger ages, children moving out is a common household change. It is not only common, it is an expected life event. Although a smaller dwelling would fit the household better at this time, it often does not lead to a change of house because it is not urgent (Blijie et al., 2009b). Only 10% of the 55+ people moves houses coinciding with children leaving the parental house (Van Iersel et al., 2009).

Divorces/end of relationships and marriage/moving in together are examples of more unexpected life events (Blijie et al., 2009b). 0,3% respectively 2,4% of the people that are willing to move say this is their most important reason. These percentages are highest in the 55-64 years old group: 0,4 and 4,2% (WoON, 2018). It should be noted that singles are only more likely to move than couples the first five years they are single (Hansen & Gottschalk, 2007). Moving in together leads relatively much to long-distance moves (Centraal Bureau voor de Statistiek, 2020a).

Another change can be the death of a partner. According to Van Iersel et al. (2009) this is the (unexpected) life event that leads to the most inclination to move. However, also after the death of a partner, only 13% of the people actually moves.

4.1.3. Retirement

As explained before, after retirement, a peak in moves can be noticed (e.g. Van Dam et al., 2013; Hansen & Gottschalk, 2006; Van Iersel et al., 2009). According to Centraal Bureau voor de Statistiek (2020a), this is not the case for short-distanced moves. However, 1% of the retired people moves within one year over a distance of more than twenty-five kilometres. This is more than double of other people in the same age group. The reason for the peak is that commuting time for work does not have to be taken into account anymore. If children have already moved out, the desire to move long-distance is higher, as they are less bound to the social network and schools in the region (Centraal Bureau voor de Statistiek, 2020a).

4.2. Unsatisfying housing and vicinity characteristics

Life events lead to reactive behaviour. People react to the life event and therefore decide to move. Proactive behaviour leads to moves before the life event takes place, to prevent necessary moves (Pope & Kang, 2010). An example that has already been given is moving because health is expected to decrease. Proactive moves therefore can lead to less stressful situations and higher residential satisfaction in the future (Pope & Kang, 2010).

A large amount of people tends to be dissatisfied with their current housing and vicinity characteristics. Of the people aged 55 years and older with an intention to move, 27,7% states that the most important reason is their current dwelling, 14,1% states the most important reason is their current vicinity. 36,5% respectively 21% of the people name it as one of the reasons (WoON, 2018). This is partly because it does not meet their current

requirements anymore, but also partly because they foresee trouble in the future. Six (important) characteristics will be explained: the size of the dwelling, the suitability for older people, the housing condition, the availability of a garden, the neighbourhood and the greater surroundings.

4.2.1. Size of the dwelling

7,3% of the 55+ people that are not satisfied with their current dwelling wants to have a bigger house. The majority, 39,7%, wants a smaller house. 53% has other reasons (WoON, 2018). Younger people more often than older people want to move because they desire bigger dwellings, whereas older people more often than young people want to move because they desire smaller dwellings. However, size is a more mentioned quality in the decision to move as people get older. This is shown in table 4.3.

Table 4.3. the desires of households that want to move because of their current dwelling (Edited from: WoON, 2018).

	55-64	65-74	75+	Total 55+
Bigger dwelling	10,0%	3,9%	3,7%	7,3%
Smaller dwelling	37,2%	40,8%	48,9%	39,7%
Something else	52,8%	55,3%	47,4%	53,0%
n x1000 =	390	307	169	929

According to Van Iersel et al. (2009), the people that live in houses smaller than 50 square meters are more inclined to move than people in big houses. Most people have difficulties defining the surface of a dwelling. Therefore it is easier to look at the number of rooms households have. Most households are satisfied when they have one room more than household members. Households that have fewer rooms than family members desire to move in the short term and are looking for a bigger house. Households that have two rooms more than household members desire to move on the long term, to live smaller (Van Iersel et al., 2009). However, the people that are looking for a smaller house, often only want it slightly smaller. They mostly acquire houses that have one room less (Hansen & Gottschalk, 2006).

Multiple reasons for people aged 55 years and older wanting to live smaller can be found in literature. However, health is mentioned most. Large houses lead to barriers as walking (much) stairs and executing household tasks (Smetcoren et al., 2017). People with decreasing health often cannot and do not want to undertake many activities, cleaning for example, anymore, which is why smaller houses fit better (Van Iersel et al., 2009).

4.2.2. Suitability for older people

24,1% of the people that want to move because of their current dwelling, do so because they want to live in another housing type (WoON, 2018). This percentage increases between the 55-64 and 65-74 age group, but decreases between the 65-74 and 75+ age group. This is probably because people in the oldest age group have already accomplished their desired move.

In general, the 55+ aged residents of one-family houses are more inclined to move than residents of multiple-family houses. The most desired change of housing type therefore is from one-family houses to multiple-family houses. These are known for the better suitability for older people. For the short-term, most moves from one-family houses to multiple family-houses are made by people with limited mobility. However, due to proactive behaviour, a part of the healthy people also already makes the move (Van Iersel et al., 2009). It should be mentioned that multiple-family houses are not necessarily suitable for older people or people with physical limitations. This is only the case if the front door, as well as the rooms within the house, are accessible without the use of stairs.

4.2.3. Housing condition

Compared to the size of the dwelling and the suitability for older people, the housing condition is mentioned less as a reason to move. For people aged 55 and older that are inclined to move because of their current dwelling, this reason is mentioned 3,1% of the time. This percentage is approximately the same for every age group (2,9-3,2%). However, of the people living in well-maintained dwellings, 75,6% does not want to move. In less maintained dwellings, this percentage is only 61,1% (WoON, 2018). So unconsciously the housing condition seems to have a greater influence on the willingness to move.

The problem of bad maintenance can for example be caused because the house is old or the owner is not capable of maintaining it himself anymore. Solutions therefore can be moving to a newer house, a smaller house (Smetcoren et al., 2017) or a rental house (Hansen & Gottschalk, 2006).

4.2.4. Availability of a garden

Both having and not having a garden were given reasons to want to move. These reasons are highly related to age. According to Hansen & Gottschalk (2006), the desire to escape gardening increases with age. This is confirmed by WoOn (2018). 5% of the 55+ people that wants to move because of their current dwelling, wants this because they want a smaller garden or no garden anymore. This percentage increases with age. On the other side, for 3,3% of the 55+ years old people, the reason is the desire for a (bigger) garden. This percentage decreases with age.

It is plausible that the desire of having a multiple-family house is related to the desire of not wanting a garden anymore (Van Iersel et al., 2009). Because the respondents were only asked for the most important reason they are not satisfied with their current dwelling, the outcome on the importance of having a garden could be distorted.

4.2.5. Neighbourhood

21% of the people aged 55 and older that wants to move, partially does so because they are not satisfied with their neighbourhood anymore. For 14,1% this is the most important reason (WoON, 2018). Reasons for dissatisfaction are for example an unsafe feeling, the relationship with neighbours and the absence of services.

Safety is an important quality for older aged residents. Older people do not dare to go out when their neighbourhood is unsafe and therefore feel locked up and lonely (Raad volksgezondheid & Samenleving, 2020). According to Tyviamaa & Kemp (2011), unsafe neighbourhoods therefore lead to the desire to move. This is confirmed by the data of WoOn (2018) which shows that 18,1% of the people that wants to move because of their current neighbourhood feels unsafe.

Neighbours seem to have a significant effect on the desire to move for people aged 55 years and older. 31,5% of the people aged 55 and over that want to move because they are dissatisfied with their vicinity, names nuisance as a reason. 29,4% names the composition of the neighbourhood as a reason (WoON, 2018). Hansen & Gottschalk (2006) observed a trade-off related to a good relationship with neighbours. If the connection with neighbours is good, reduced mobility or disadvantages of the dwelling seem to lead to the desire to move less often. The importance of good contact with neighbours applies most to people that are not married, especially widowed people (Smetcoren et al., 2017).

Not questioned in WoOn (2018) but of importance as well is the lack of services in a neighbourhood (e.g. Smetcoren et al., 2017; Hillcoat-Nallétamby & Ogg, 2013; Hansen & Gottschalk). As mobility decreases with age, a short distance to services such as shops and health-related amenities becomes more important. Closeby public transport is desired to reach services that are not located within walking distance (De Jong et al., 2012). Older people that live in neighbourhoods that do not facilitate this often are inclined to move (Tyviamaa & Kemp).

4.2.6. Location

Drenthenieren is a well-known term in the Netherlands. It means that retired people want to leave the big cities and Randstad because they want to live more quietly in more rural areas, in Drenthe for example (Centraal Bureau voor de Statistiek, 2020a). The net migration rate from cities to more rural areas indeed is positive. However, that does not mean that every person aged 55 or older wants to leave the city. The general conclusion of Van Dam et al. (2013) is that people desire to move away from extreme environments. People living in centre-urban want to migrate to a less urban area for quietness. People living in rural areas want to migrate to villages to find more suitable housing and live closer to services.

4.3. Personal reasons

The third category of reasons to be inclined to move, next to life events and dissatisfaction about housing and vicinity characteristics, is personal reasons. Most of the time, it is not one of the categories that leads to the desire to move, but a combination of categories (Roy et al., 2018). The personal reasons that will be explained are moving back to the place of birth, family and friends and financial reasons. Moving back to the place of birth is often combined with retirement for example.

4.3.1. Moving back to the place of birth

Drenthenieren can also partly be explained by people moving back to their place of birth (Van Dam et al., 2013). As explained in the previous chapter, the net migration of young people from rural to urban areas is positive because of study and job opportunities (Van der Meer, 2006). These migrated people often do not feel attached to this place, but still have sentimental feelings about the place they grew up (Centraal Bureau voor de Statistiek, 2020). They

desire to move back and therefore can be characterized as return migrants (Van Dam et al., 2013).

4.3.2. Friends and family

The desire to live closer to family is the fifth most important reason for people aged 55 and older to be inclined to move (7%). In total, 10,8% of this group states that wanting to live closer to family, friends or an acquaintance is one of the reasons to move (WoON, 2018). What stands out is that when looking at people that want to move to another town, these percentages are way higher. Over 25% of the people that want to move to another town states that moving closer to family, friends or an acquaintance is the most important reason (Centraal Bureau voor de Statistiek, 2020a). This is related to the decrease of mobility and the need for help for daily activities (De Jong et al., 1995).

4.3.3. Financial reasons

Of the 55+ people that desire to move, 10,9% has a financial reason. For 7,8% it is the most important reason. Almost half of them (45,0%) indicates that this has to do with an increase in housing costs. 76,8% of the people that want to move because of increased housing costs are tenants (WoON, 2018). Increasing housing costs therefore seem to be a bigger problem in the rental sector.

Reasons of the remaining 55% of the people are not explained by WoON (2018). Other sources suggest that the desire for increasing one's budget could be an explanation. Dillingh et al. (2017) state that people might want to move to a smaller house to release equity, especially after retirement. The need for an equity release is mostly the case for freelancers or other people with limited pensions (Hoekstra et al., 2018; Dillingh et al., 2017). However, this is often seen as a last resort as the intention of buying a house is mostly not to use the increasing value for daily expenses (Dillingh et al., 2017).

4.4. Conclusion

In this chapter, three types of reasons to move are mentioned: life events, dissatisfaction with current house or vicinity and personal reasons. For every type, multiple frequent reasons are shortly explained.

Most people that desire to move have multiple reasons. Some of those reasons are related to each other. According to WoON (2018), 23,2% of the people of 55 years and older that desire to move because they want to live closer to family, friends and acquaintances also name health/need for care as a reason. 26,6% of the people that are not satisfied with their current neighbourhood, also are not satisfied with their current dwelling. These are just two clear examples.

In this chapter, it became clear that a mobility decrease is a reason to move, but not how this affects the housing choice. Lots of people want to move because of their current dwelling and vicinity. Which surface and number of rooms they desire is not clear yet. The same goes for how a safe feeling can be reached and how important neighbours and amenities are in housing choice. Financial reasons can explain the willingness to move. The influence on the desired tenure and price is not discussed yet. The qualities people are looking for will be discussed in the next chapter, after which a selection will be made whereupon the importance of the separate qualities will be researched in the last chapters.

5. Desired qualities

We now know something about people and households aged 55 years and older and the reasons why part of them wants to move. What is not clear yet is what kind of dwelling and neighbourhood they want to move to. This of course is hard to say, as there is not just one type of dwelling that everyone in the age group wants (Blijie et al., 2009a). In this chapter, an answer will be given to the question 'What are the housing and vicinity preferences of Dutch people aged 55 years and older that are willing to move to a private rental or owner-occupied dwelling?'. The subject will give a general view on the preference of the different 55 years and older age groups. The chapter will not take the desires of people that want to move to social housing into account. These people are filtered out from the datasets that are used in this chapter.

In this chapter, the desired housing qualities will be discussed first, after this the desired vicinity qualities.

5.1. Housing qualities

5.1.1. Rental or owner-occupied

If being asked about their preference, 21,9% of the population thinks they will move to a rental dwelling, 78,1 thinks they will move to an owner-occupied one (WoON, 2018). The preference for a rental dwelling strongly increases with age, this is shown in table 5.1.

Table 5.1. Preference for rental or owner-occupied housing divided by age (WoON, 2018).

	55-64	65-74	75+	Total 55+
Prefers rental	13,4%	25,2%	44,3%	21,9%
Prefers owner-occupied	86,6%	74,8%	55,7%	78,1%
N x1000 =	234	163	62	459

This is partly because of the financial reason that is explained in the previous chapter. People that have low incomes sometimes prefer to sell their dwelling and rent a new one, to release equity (Blijie et al., 2009b; Stuart-Fox et al., 2021). Another reason is that tenants are not responsible for the big maintenance activities in their dwelling (Hansen & Gottschalk, 2006). However, people nowadays switch between owner-occupied houses more often than before. the amount of people that moves from an owner-occupied to a rental dwelling is decreasing (Van Iersel et al., 2009; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2019).

Other reasons that are found for this phenomenon are the cohort-effect and the supply of housing. Of the older age cohort, fewer people have ever owned a house and therefore they cannot or do not want to own one (Blijie el al., 2009a). According to Blijie et al. (2009a), the houses that the older age groups are looking for, are relatively more present in the rental sector. The preference for tenure therefore is a consequence of the preference for a certain housing type.

5.1.2. Housing type

People aged 55+ are predominantly looking for multiple-family houses (60,8%). Only in the age group 55-64 the desire for a one-family house is slightly in favour. For the people aged 75+, almost nine out of ten people hope to move to a multiple-family house. The division for desired housing type by age can be found in table 5.2

Table 5.2. Preference for one-family and multiple-family housing divided by age (WoON, 2018).

	55-64	65-74	75+	Total 55+
Prefers one-family	53,2%	28,8%	12,0%	39,2%
Prefers multiple-family	46,8%	71,2%	88,0%	60,8%
N x1000 =	234	163	62	459

Especially for the older childless households, the preference for a certain housing type is important. They will not move to another housing type than their first preference. Also for (other) 55+ people that have a preference for apartments, this is the case (Blijie et al., 2009a).

As explained in the previous chapter, (expected) decreasing mobility is a reason to move. To remain independent, people with decreasing mobility often want to move to dwellings that are meant for elderly people. As table 5.3 shows, the demand for houses meant for elderly people also increases with age. It is a misunderstanding that these always have to be multiple-family houses (Van Dam et al., 2013). This image emerged because care facilities often are housed in apartment-like buildings (Blijie et al., 2009a), but only 72,2% of the people that wants to move to a dwelling with that quality, is looking for a multiple-family house (WoON, 2018). Examples of houses meant for elderly people are sheltered houses and houses that are externally reachable without stairs with at least a bathroom, kitchen, living room and sleeping room on the entrance level (Stuart-Fox et al., 2021). These types of dwellings are mostly present in the rental sector, which is why part of the housing seekers says to prefer a rental house (Van Dam et al., 2013).

Table 5.3. Preference for elderly housing divided by age (WoON, 2018).

	55-64	65-74	75+	Total 55+
Elderly housing	24,8%	42,6%	64,1%	36,4%
'Normal' housing	75,2%	57,4%	35,9%	63,6%
n x1000 =	234	163	62	459

5.1.3. Housing surface

For households with children, the housing surface seems to be the most important physical housing characteristic while looking for a new dwelling (Blijie et al., 2009a). These are the households that are on average looking for the biggest houses (WoON, 2018). Other households also assign value to the surface but have other priorities (Blijie et al., 2009a). In general, 55+ households are looking for smaller houses than their current dwelling (WoON, 2018). This is especially true for the people that exchange their one-family house for a multiple-family house (Van Iersel et al., 2009). People that are looking for multiple-family houses on average are looking for smaller dwellings. This is also the case for older people and smaller households (WoON, 2018). Table 5.4 shows the 15th percentile, the median and the 85th percentile of the desired housing surface, divided by age to give a general impression about the demand for housing surface.

Table 5.4. The 15th percentile, the median and the 85th percentile of the desired housing surface, divided by age (WoON, 2018).

	55-64	65-74	75+	Total 55+
15%	80sqm	75sqm	60sqm	75sqm
50%	110sqm	100sqm	100sqm	100sqm
85%	175sqm	145sqm	130sqm	150sqm

What stands out is, that although 55 years and older people on average want to live smaller, 72,4% would like to retain or upgrade the surface of their living room (WoON, 2018).

5.1.4. Number of rooms

Paragraph 4.2.1. already explained a relationship between demand for surface and number of rooms. This paragraph also explained that most households are satisfied if their house has one room more than household members (Van Iersel et al., 2009). Although this number of rooms satisfies households, this is often not the number of rooms they prefer. Looking at the most desired number of rooms per household size, the preference and satisfaction only correspond for the two-person and three-person households. Looking at the median number of rooms different households sizes are looking for, the preference and satisfaction only correspond for three-person households (WoON, 2018). This is illustrated in table 5.5. As household size decreases with age, the desired number of rooms also decreases with age. Until the age of 65 the desired number of rooms is four, after that it is three (WoON, 2018).

Table 5.5. number of rooms desired by different households sizes and ages (WoON, 2018).

	Most mentioned desired number of rooms
1 person household	3
2 persons household	3
3 persons household	4
4 persons household	4
5 or more persons household	4
55-64	4
65-74	3
75+	3

5.2. Vicinity qualities

In paragraph 3.9, the attachment of older persons to their dwelling is discussed. This attachment is for a great deal caused by the vicinity in which it is housed (Hillcoat-Nallétamby & Ogg, 2013). This is confirmed by the data of WoON (2018), shown in table 5.6.

Table 5.6. The desire to move within the current neighbourhood (WoON, 2018).

		55-64	65-74	75+
Share of people that want to move within their current neighbourhood		27%	34%	47%
What would people that want to move within their neighbourhood do, if they cannot find a house?	Not move	33%	40%	45%
	Adjust housing preferences	9%	7%	10%

More than a quarter of the people age 55 to 64 wants to stay in their current neighbourhood, this applies to almost half of the people aged 75 years and older. 26% of the people aged 75 years and older does not even want to move if they cannot find a dwelling in their current neighbourhood. The remainder of this chapter will explain some important neighbourhood qualities people aged 55 years and older are looking for.

5.2.1. Services

The neighbourhood a person lives in becomes more important as one gets older because mobility decreases and therefore more time is spent at the place one lives (Raad voor de Leefomgeving en Infrastructuur, 2020). This is especially the case for people aged 75 years and older. Independence is important for these people, and therefore neighbourhoods short-distanced from services are desired (Blijie 2009a).

Reports that focus on the availability of services, mostly focus on the availability of shops. Dutch elderly want to have shops within walking distance from their houses (e.g. Blijie et al., 2009a; Stuart-Fox et al., 2021), as they can have difficulties with cycling and public transport is expensive for households with lower incomes (Raad voor de Leefomgeving en Infrastructuur, 2020). This is confirmed by WoON (2018), 25,4% of the persons aged 55-64, desire a shop within 500 meters from their house, for the age 75+ age group this percentage has increased to 47,1%. This is shown in table 5.7.

Table 5.7. Desired distance to shops (WoON, 2018).

	55-64	65-74	75+	Total 55+
< 500 meters	25,4%	41,6%	47,1%	32,7%
< 5 kilometers	51,5%	39,6%	30,6%	45,6%
< 15 kilometers	6,3%	2,7%	1,9%	4,8%
Further distance	0,1%	0,1%	0,0%	0,0%
No preference	16,7%	16,1%	20,4%	17,0%
n x1000 =	87	42	18	147

Although public transport is expensive, this is an important service for older people as well. 57,4% of the people aged 55-64 find the proximity of public transport important (17,0% really important). This percentage is increasing with age and is 65,7% for the people aged 75 years and older (30,5% really important). This is shown in table 5.8. Although public transport is expensive, households with low income find proximity more important than households with high incomes. This can be explained by the relation between income and mobility. People with lower income in general have lower physical mobility and less often own a car (WoON, 2018).

Table 5.8. The importance of public transport (WoON, 2018).

	55-64	65-74	75+	Total 55+
Really important	17,0%	20,0%	30,5%	19,9%
Important	40,4%	39,7%	35,2%	39,4%
Not important	32,8%	32,2%	27,9%	31,9%
Really not important	9,8%	8,1%	6,5%	8,8%
n x1000 =	234	163	62	459

5.2.2. Contact with neighbours

According to Blijie et al. (2009a), older people value contact with their neighbours. Raad Volksgezondheid & Samenleving (2020) explains that safe, inviting neighbourhoods with possibilities to meet therefore are important. If neighbourhoods do not have these qualities, the inhabitants become self-involved and people can feel locked up. The services that are already mentioned can stimulate the possibilities to meet, but also other amenities like cafes and playgrounds.

5.2.3. Mix of ages

As probably already suspected, older people are not the users of playgrounds. Raad Volksgezondheid & Samenleving (2020) and Medical Delta (2013) found that older people want to be part of a greater community. Older people are still developing themselves and want to contribute to their society. Therefore most of them value living between people of other age groups.

However, part of the elderly people also prefers to live with people of the same age (Medical Delta, 2013). An example is the concept of Knarrenhof. More and more 'Knarrenhofs' are being built in the Netherlands. In these communities, people aged 60 years or older live independently but have a lot of contact with their neighbours.

The inhabitants can help each other if health decreases, or can collectively obtain health care. This prevents institutionalization (Broekmans, 2019; Nijkamp & Bosker, 2020).

5.2.4. Mix of housing types

Raad Volksgezondheid & Samenleving (2020) states that a mix of one-family and multiple-family housing types in the neighbourhood is necessary to stimulate interaction between neighbours. This mix leads to a combination of liveliness and spatial quality.

From the safety point of view, a mixed neighbourhood would also be logical. Elderly people are frail and this leads to the fact that safety is an important quality for them in deciding where to live (Raad Volksgezondheid & Samenleving, 2020). As most of the people aged 55 years and older want to move to a multiple-family house, this housing type should absolutely be present. However, places that mainly consist of multi-family houses are perceived as unsafe areas (Figueroa Martínez et al., 2019), which is why one-family houses should also be part of the neighbourhood.

Table 5.9 shows that neighbourhoods only consisting of multiple-family houses indeed are the least desired neighbourhoods for all ages. However, there is no strong preference for mixed areas as well. From the age of 65 years, more people have no preference than a preference for one of the specific housing type compositions.

Table 5.9. The type of housing that people aged 55 years and older want to have in their future neighbourhood (WoON, 2018).

	55-64	65-74	75+	Total 55+
Mainly one-family housing	41,1%	29,8%	19,2%	34,1%
Mainly multiple-family housing	6,0%	12,2%	14,9%	9,4%
A mix	15,4%	21,5%	23,0%	18,6%
No preference	37,5%	36,4%	42,9%	37,9%
n x1000 =	234	163	62	459

5.3. Conclusion

In this chapter, the housing preferences of people aged 55 years and older that are willing to move to a private rental or an owner-occupied dwelling are discussed. For part of the desired qualities, the exact preference is not clear yet. For part of them it is, although these preferences are independently asked. The preferences could change if the preferences would be asked combined. This would also give more insight in the importance of the different qualities compared to each other. This will be done in the survey of this research

What became clear in this chapter is that all 55+ age groups prefer an owner-occupied house, although the share of people that prefers this decreases by age. The 55-64 age group has a slight preference for an one-family house, the older age groups prefer apartments. People until the age of 75 are mostly looking for ‘normal’ housing. People aged 75 years or older prefer a house that is suitable for elderly people. The preferred housing surface decreases with age, so does the preferred number of rooms. People until 65 desire four rooms, older people desire three rooms. Most people prefer a living room that is at least as big as their current living room.

A lot of people aged 55 years and older want to move within their current neighbourhood. More than a quarter of the people aged 75 years and older does not even want to move if they cannot find a new dwelling in their current neighbourhood. People find proximity to amenities important. Whether proximity to health facilities is even more important than other amenities, because of decreasing health, is not reported in WoON (2018). Whether the preference for amenities in the neighbourhood also means that people want to live in a lively neighbourhood is not clear yet as well. According to this chapter, people aged 55 years and older find contact with neighbours important, although this cannot be confirmed by numbers. Furthermore, the literature on the desired age composition of the neighbourhood contradicts and can also not be found in WoON (2018) and the outcome of the preferred type of building types in the neighbourhood does not show a strong preference. Therefore these qualities would be interesting to include in the survey.

6. Survey design

To be able to answer the remaining sub-questions, a survey is developed. In this chapter, the design of the survey will be explained. The analysis of the received sample and data will be elaborated in the next chapters. The complete survey can be found in appendix B.

The survey has been sent by Panelclix to their Dutch members that are 55 years and older. Panelclix is a company that sends surveys of universities, governments and market researchers to their customer base. Customers get a reward if they complete a survey. Everyone can sign up for this customer base and when they do, they agree with the privacy policy of Panelclix. This policy can be found in appendix A and meets the AVG.

For the researcher, it is not known how many people are in the customer base, how representative the customer base is and how many people have received an invitation. In the Netherlands in total, 5,8 million people are 55 years or older (Centraal Bureau voor de Statistiek, 2020g). However, not all of them are willing to move to an owner-occupied or rental dwelling. The survey is closed after 1500 respondents (+ a margin of error of 5%) that met the right criteria (see paragraph 6.1) had completed the survey.

6.1. Selection criteria

To make sure that the intended target audience fills in the survey, the survey starts with questions regarding selection criteria. Respondents have to be Dutch, should be 55 years or older, should possibly be willing to move within five years, should want to live independently, and should have a desire for a private rental or owner-occupied dwelling.

In the end, 38,6% of the respondents met these criteria. This percentage is higher than could be expected from the data of WoON (2018). This can be explained by the fact that in WoON, people are asked whether they are possibly willing to move within two years. With expanding this criterion to five years, more respondents could be reached. More information on the (amount of) responses can be found in chapter 7.

6.2. Household composition

To be able to make a distinction between different 55+ household types, the respondents are asked about their age, (future) household composition, income and mobility. Blijie et al. (2009a) name these as important household characteristics that influence housing preferences. While equity can be of importance as well, probably more than income, no question about this is asked. Correctly estimating your own equity is expected to be too difficult.

6.3. Desired qualities

Preferences regarding housing type, tenure, housing surface, number of rooms and suitability for elderly people can differ between different household types. Therefore, preferences regarding these characteristics are being asked in the survey. Noteworthy is that people are asked whether they want to move to an apartment instead of a multiple-family house, as the latter can be a confusing term for respondents. The other answer options are based on (findings in) WoON (2018). Next to the questions about desired housing qualities, a question is added to find out their willingness to pay.

The subsequent part of the survey is focused on vicinity qualities. As nearby services seem to be of importance and health decreases as people get older, a question about an acceptable distance to health facilities is added. One question is about the preferred degree of urbanization. In the remaining four questions, the respondent has to indicate on a four-point scale which of two situations is preferred. These questions focus on contact with neighbours, the age of the people in the neighbourhood, the amount of activity in the neighbourhood and the building heights in the neighbourhood.

6.4. Current qualities

The current living situation is being asked as well, to be able to find a relationship between (changes in) household characteristics and desired changes in qualities. Therefore, the current household composition of the respondents is asked, as well as the current housing qualities and the four numbers of the current postal code to define the current vicinity qualities.

6.5. Conjoint analysis

The conjoint measurement method is introduced in chapter 2.4.2. This section will explain the specific elaboration for this research.

Most qualities that are asked in the desired qualities part are included as attributes in the conjoint analysis as well. The only exception is the degree of urbanization. The reason for this is that BPD can barely change the degree of urbanization of a city, while the other qualities can be developed or at least be stimulated.

An overview of the attributes and corresponding levels is added in table 6.1. In total, seven attributes

contain two levels and four attributes contain three levels. With this amount of levels, it is possible to construct 2^7*3^4=10368 residential profiles. If all profiles are included in a survey, this is called a full-factorial design (Molin, 2011). However, Molin (2011) states that every profile has to be observed about thirty times to acquire reliable results. This is not possible within the scope of this research. Therefore an orthogonal design will be used. Using the orthoplan command in SPSS, the amount of profiles is restricted to 27. Using this command, every level is at least combined three times to all levels of the other attributes. The constructed profiles are added to appendix B.

As explained in chapter 2, a hierarchical information integration approach will be used, in which a distinction will be made between a housing qualities construct and a vicinity qualities construct. The housing qualities construct consist merely of physical housing qualities. The vicinity qualities construct consists of a physical vicinity quality (building heights), a functional vicinity quality (distance to health facilities) and social vicinity qualities (contact with neighbours, ambiance and composition of the neighbourhood). The analysis to be used are described in the second chapter as well. To be able to conduct the multiple regression and multinomial logit analyses, effect-coding is applied to the attributes. The codes are added in appendix C.

Table 6.1 Attributes and corresponding levels.

Attribute	Level	Brief explanation
Housing qualities		
Tenure	owner-occupied rental	-
Housing type	one-family house apartment	-
Housing surface	70 sqm 100 sqm 130 sqm	The surface of all floors combined.
Number of rooms	3 rooms 4 rooms 5 rooms	The total of living, sleeping, study and workrooms.
Elderly house	yes no	A dwelling that is meant for elderly people is easy to use by people that have a decreased mobility.
Price	low class mid class high class	The fifteenth (low), fiftieth (middle) and eighty-fifth (high) percentage of housing transaction prices of newly built owner-occupied housing or the fifteenth (low), fiftieth (middle) and eighty-fifth (high) percentage of rental prices above the social rent limit, dependent on the desired living province.
Vicinity qualities		
Building heights	mainly low a mix of heights	The desired heights in the neighbourhood. Low means a maximum of four storeys.
Distance to health facilities	less than 500m 500m-1000m more than 1000m	The door-to-door distance to health facilities like medical practices, pharmacies and physiotherapists.
Contact with neighbours	a lot of privacy a lot of contact with neighbours	-
Ambiance	quiet lively	This relates to the amount of people and activities on the streets.
Composition of the neighbourhood	mix of ages people of the same age	-

So the survey consists of selection criteria, questions about household composition, desired qualities, the current living situation and a conjoint part. The results of the survey will be discussed in chapter 7 and 8.

7. Subgroups

This chapter will be used to analyse the traditional part of the survey that is developed for this thesis. The goal of this chapter is not only to get to know the respondents but also to find interesting characteristics whereupon groups can be distinguished in the conjoint analysis. It will answer the fourth sub question: 'Which Dutch 55 years and older subgroups that are willing to move to a private rental or owner-occupied dwelling can be distinguished?'

This chapter will first introduce the respondents, their reasons to move will be explained after this and lastly, the outcomes and trends for every housing and vicinity attribute will be discussed.

7.1. The respondents

4216 people have started the survey. 93 of those were younger than 55 and therefore did not match the requirements of the survey. Another 56 closed the survey after the first question. 2548 of the remaining people indicated that they absolutely wanted to move, maybe wanted to move or wanted to move but are not able to find a dwelling that fits their demands. The assumption that people are less willing to move by an increasing age is confirmed by the survey. This is shown in table 7.1 [X^2 (1, *N = 4067*) = 57,1, p < .001]. Note that the answer possibilities match the answer possibilities of WoON (2018), but that the question asked differs. WoON (2018) asked the willingness to move within two years, this survey asked the willingness to move within five years.

Table 7.1. Are the respondents willing to move?

	55-64	65-74	75+	Total
Absolutely not	31,3%	35,8%	44,8%	34,7%
Possibly, maybe	46,5%	47,3%	44,2%	46,6%
I would like to, but cannot find something suitable	7,5%	6,9%	4,2%	6,9%
Definitely	11,7%	7,6%	4,4%	9,2%
I have already found something	2,9%	2,4%	2,4%	2,7%
n=	1937	1677	453	4067

Of the 2548 people that were left, 135 did not want to live independent anymore and 767 wanted to move to a social rental dwelling. 67 people have left the survey voluntarily after the second question, which means that the total sample consisted of 1579 people.

The average completion time of the survey was eleven minutes and thirteen seconds. 128 respondents have filled in all questions within six minutes. The answers of these respondents have been studied intensively to filter out respondents that have obviously filled in the survey incorrectly. The filtering of a respondent took place if a respondent had given multiple contradicting answers in the conjoint analysis. After this procedure, the sample consisted of 1570 responses. This means that 15700 measurements on the conjoint rating task and 7850 measurements on the conjoint ranking task are received. Their characteristics per age group are described in table 7.2. The percentages in blue are the corresponding outcomes of WoON (2018).

More than half of the respondents is part of the youngest age group: 55-64. 114 respondent are aged 75 years or older. This is less than the desired amount of 200 respondents per respondent group, as explained in chapter 2. This will make it harder to make reliable statements about this group on its own. However, for comparing purposes, this amount should do.

The sample does not have surprising characteristics. The highest share of people that have children living at home can be found in the youngest age group. The highest amount of households only consisting of couples can be found in the 65+ age group, because the children of the people in that group have mostly moved out. Furthermore, the youngest age group is more mobile and has a higher income, probably because this group has the highest share of people that is active on the labour market.

Compared to the weighted outcome of WoON (2018), the distribution is somewhat different. In WoON (2018) 51,0% is aged 55-64, 35,5% is aged 65-74 and 13,5% 75 years or older. Note that the selection criterium for willingness to move between WoON (2018) (two years) and the self-perfomed survey (five years) differ. Next to that, a big difference can be found in the mobility. According to WoON (2018), in the target group 36,2% of the people aged 55-64, 46,4% of the people aged 65-74 and 65,1% of the people aged 75 years and older have a decreased mobility. In the self-performed survey, all percentages are lower. As shown in table 7.2, the outcomes of household composition and income also do not correspond. Therefore it is concluded that the sample of the self-conducted survey is not representative for the population. Therefore it is not possible to generalize the outcomes. It is however possible to make statements on subgroups and on trends.

Table 7.2. Characteristic of the sample (edited from: own survey & WoON (2018).

	55-64		65-74		75+		total	
Current household composition								
Single person	18,3%	27,9%	19,0%	31,4%	22,8%	42,5%	18,9%	31,2%
Couple	51,3%	48,2%	74,4%	64,3%	73,3%	54,7%	61,9%	54,8%
Single parent and child(ren)	5,4%	7,0%	2,3%	1,3%	0,0%	1,3%	3,8%	4,2%
Couple and child(ren)	25,0%	16,9%	4,0%	2,9%	3,5%	1,4%	15,4%	9,8%
Mobility								
Normal mobility	85,2%	63,8%	75,8%	53,6%	75,4%	34,9%	80,9%	56,2%
Decreased mobility	14,8%	36,2%	24,2%	46,4%	24,6%	65,1%	19,1%	43,8%
Income								
Less than 1x middle-income	14,1%	15,3%	21,5%	22,1%	21,1%	35,9%	17,5%	20,6%
1-1,5x middle-income	26,5%	20,6%	36,6%	34,5%	33,3%	34,6%	30,9%	27,4%
1,5-2x middle-income	20,8%	20,4%	15,1%	20,7%	19,3%	17,9%	18,5%	20,1%
2x middle-income or more	16,7%	16,7%	7,0%	22,7%	6,1%	11,6%	12,2%	31,9%
Unknown	21,9%	-	19,9%	-	20,2%	-	21,0%	-
n = (n x1000 =)	852	234	604	163	114	62	1570	459
	54,3%	51,0%	38,5%	35,5%	7,3%	13,5%	100,0%	100,0%

7.2. Reasons to move

The respondents had to indicate one to three reasons why they were willing to move. They could choose between eight pre-defined reasons or write down another reason. 204 times, a reason was written down and 157 times this reason could be subdivided to one of the eight predefined reasons. At the end, 2534 times a reason was chosen, which is 1,6 reason per person. Table 7.3 shows how many times each of the eight reasons is chosen.

Table 7.3. Reasons to move

Rank	Reason	Count
1	Current dwelling does not suffice desires/demands anymore	537
2	Health or need for care	398
3	To unlock money from the surplus of an owner-occupied dwelling	372
4	The living environment or living vicinity of the current dwelling does not suffice desires/demands anymore	353
5	Change in housing composition	326
6	To decrease housing costs	264
7	To live closer to family, friends or acquaintances	200
8	Work	37

The characteristics of the respondents per reason to move are analysed and few trends are found. The characteristics per reason can be found in appendix D. The reasons health or need for care [X^2 (2, *N = 1570*) = 117.4, p < .001] and to live closer to family, friends or acquaintances [X^2 (2, *N = 1570*) = 13.7, p < .001] are mentioned more in older age groups. This is not surprising, as health decreases as people get older (see paragraph 3.6) and a decrease in health is a reason to move closer to family, friends and acquaintances (see paragraph 4.3.2). On the other side, change in household composition [X^2 (2, *N = 1570*) = 104.0, p < .001] and the living environment or living vicinity of the current dwelling does not suffice desires/demands anymore [X^2 (1, *N = 1570*) = 30.5, p < .001] are mentioned less often in older age groups. Most changes in household composition among the respondents take place in the youngest age group, due to children moving out, which can explain that this is a more important reason for younger ages. Paragraph 3.9 already explained that people that live for a longer time at the same place, generally older people, are more attached to and positive about their living environment.

Looking at the tenure, people currently living in an owner-occupied dwelling name health or need for care more often as a reason to move than people living in a rental dwelling [X^2 (1, *N = 1570*) = 13.4, p < .001]. This is the case for every age group. What stands out is that 65,6% of those people living in a rental dwelling are not mobile anymore, while this is the case for only 35,5% of those people in an owner-occupied dwelling. An explanation is that it is harder to move houses when living in an owner-occupied house and therefore more people move as a precaution for decreasing health. Next to that, people that live in an owner-occupied dwelling, more often live in an one-family house, which in general is less suitable for people with reduced mobility.

People living in a rental dwelling more often name to decrease housing costs as a reason to move [X^2 (1, *N = 1570*) = 25.5, p < .001]. As explained in paragraph 3.5, monthly housing costs for 55+ people living in a rental dwelling often are higher than the monthly costs for 55+ people living in an owner-occupied dwelling, which makes

this a logical result. Next to that, current dwelling does not suffice desires/demands anymore [X^2 (1, *N = 1570*) = 6.9, p = .009] is mentioned more by people living in a rental house. This could be because it is harder to adjust rental dwellings to new housing desires than owner-occupied houses. The last reason that is mentioned more by people living in a rental dwelling is the living environment or living vicinity of the current dwelling does not suffice desires/demands anymore [X^2 (1, *N = 1570*) = 30.5 p < .001]. Table 5.9 already showed that neighbourhoods mainly consisting of multiple-family housing are the least preferred neighbourhoods. People that rent their dwelling, more often live in these kind of neighbourhoods, which could be an explanation. Furthermore, people that live in rental dwellings on average have lived for a shorter time in their current dwelling than people in owner-occupied houses (WoON, 2018) and therefore are less attached to this dwelling and the corresponding neighbourhood.

The last thing that stood out is that the higher urbanized the neighbourhood the respondents live in is, the more they want to move because the living environment or living vicinity of the current dwelling does not suffice desires/demands anymore [X^2 (1, *N = 1449*) = 15.6, p < .001].

7.3. housing and vicinity preferences

In this section, the outcome of the housing and vicinity preferences in the traditional survey part will be elaborated. It should be noted that the qualities are questioned somewhat different compared to the conjoint survey part. In the traditional survey, the answer possibilities for housing surface and number of rooms were ranges, while the possibilities in the conjoint analysis were discrete values within those ranges. In the traditional survey, the acceptable price and acceptable distance to health facilities were asked, whereas the conjoint analysis focuses more on the preferred price and distance. For the building heights, contact with neighbours, ambiance and composition of the neighbourhood, the respondents had to indicate on a four-point scale what their preference between the two extremes is. In the conjoint analysis, only the two extremes of every attribute are asked. The outcome of the questions of the traditional survey, also divided over different age groups, can be found in table 7.4. The most favoured answers are marked green.

What stands out is that the most preferred qualities are mostly the same for every age group. Most people want to live in an owner-occupied house that is suitable for elderly people, with a surface of 80 to 120 square meters and four rooms. They prefer a neighbourhood in which the buildings are mainly low (a maximum of four storeys), where not a lot of people are on the streets and not a lot of activities take place, where people of different ages live and where they can find a lot of privacy. They find a distance of 500 to 1000 meters to health facilities acceptable and are willing to pay a medium price for their desired dwelling. The only desire that is not the same for every age group is the desired housing type. Where most people in the youngest age group (55-64) want to live in an one-family house, the other age groups prefer an apartment.

As the people aged 55 years and older can be distinguished in many more ways than just by age, comparable tables are made based on mobility, income, future household composition, current tenure, current housing type, desired tenure, desired housing type, desired tenure and housing type combined, willingness to pay and reason to move. These can be found in appendix E. The trends that are found per attribute are discussed below.

7.3.1. Tenure

The major part of the respondents wants to move to an owner-occupied dwelling (85,7%). This is the case for every age group. However, the older the respondents are, the more often they want to move to a rental dwelling [X^2 (2, *N = 1570*) = 20.4, p < .001]. For the 75+ group, about one in four respondents wants to move to a rental dwelling (23,7%). In total, 90,8% of the respondents that now live in an owner-occupied dwelling, also want to move to an owner-occupied dwelling. But also more than half of the people (53,1%) that now live in a rental dwelling wants to move to an owner-occupied house. Especially the people that want to move because of a change in household composition and households with children want to move from a rental to an owner-occupied dwelling. The amount of people that wants to move from an owner-occupied to a rental dwelling increases with age [X^2 (2, *N = 1359*) = 17.6, p < .001], the amount of people that wants to move from a rental to an owner-occupied dwelling decreases with age [X^2 (2, *N = 211*) = 21.8, p < .001]. Only from an age of 75 years, The percentage of people that wants to move from an owner-occupied to a rental dwelling (15,0%) is higher than the share of people that wants to move from a rental to an owner-occupied dwelling (14,3%).

People that are looking for a rental dwelling have a clear preference for an apartment (71,0%) whilst people that are looking for an owner-occupied dwelling mostly want to move to an one-family-house (58,7%) [X^2 (1, *N = 1547*) = 77.1, p < .001].

Table 7.4. Outcomes of the traditional survey.

	Total	55-64	65-74	75+
Tenure				
owner-occupied	85,7%	89,1%	82,8%	76,3%
rental	14,3%	10,9%	17,2%	23,7%
Housing type				
one-family house	54,2%	64,1%	43,7%	36,0%
apartment	44,3%	34,9%	54,5%	61,4%
unknown	1,5%	1,1%	1,8%	2,6%
Housing surface				
<80 sqm	8,7%	6,7%	11,4%	8,8%
80-120 sqm	65,7%	64,8%	67,1%	65,8%
120 or more sqm	20,3%	22,8%	17,2%	17,5%
unkown	5,4%	5,8%	4,3%	7,9%
Number of rooms				
<4 rooms	34,1%	29,7%	38,6%	43,0%
4 rooms	51,8%	51,9%	52,0%	50,0%
5 or more rooms	12,3%	16,5%	7,6%	5,3%
unknown	1,8%	1,9%	1,8%	1,8%
Elderly housing				
yes	78,5%	72,9%	85,8%	82,5%
no	11,2%	16,2%	5,1%	6,1%
Indifferent	10,3%	10,9%	9,1%	11,4%
Acceptable price				
low class	40,4%	40,5%	41,9%	32,5%
mid class	46,3%	46,7%	44,2%	54,4%
high class	7,9%	8,2%	7,5%	7,9%
unknown	5,4%	4,6%	6,5%	5,3%
n=	1570	852	604	114

	Total	55-64	65-74	75+
Building heights				
mainly low	56,3%	52,9%	38,1%	40,4%
	18,7%	15,7%	21,5%	26,3%
	12,1%	11,0%	13,2%	14,0%
a mix of heights	16,0%	14,3%	19,2%	11,4%
unknown	6,9%	6,0%	7,9%	7,9%
Acceptable distance to health facilities				
less than 500m	7,6%	4,9%	9,6%	16,7%
500m-1000m	55,3%	49,2%	63,1%	59,6%
more than 1000m	31,1%	38,1%	23,3%	20,2%
unknown	6,0%	7,7%	4,0%	3,5%
Contact with neighbours				
a lot of privacy	25,2%	28,1%	21,9%	21,1%
	27,5%	27,2%	26,2%	36,0%
	26,3%	24,2%	29,1%	27,2%
a lot of contact with neighbours	16,0%	15,5%	17,4%	12,3%
unknown	5,1%	5,0%	3,5%	5,1%
Ambiance				
quiet	41,0%	44,1%	38,6%	30,7%
	26,9%	24,6%	29,5%	30,7%
	17,9%	17,0%	18,7%	20,2%
lively	9,9%	10,2%	8,9%	13,2%
unknown	4,2%	4,0%	4,3%	5,3%
Composition of the neighbourhood				
People of the same age	10,4%	10,3%	10,3%	11,4%
	14,9%	14,7%	15,2%	14,9%
	23,4%	22,7%	23,8%	26,3%
Mix of ages	45,2%	45,2%	45,2%	44,7%
unknown	6,2%	7,2%	5,5%	2,6%
	1570	852	604	114

7.3.2. Housing type

The with age increasing demand for an apartment is significant [X^2 (2, *N = 1547*) = 73.5, p < .001]. Most people that are not mobile anymore also prefer an apartment (54,0%), while people that are mobile prefer an one-family house (56,7%) [X^2 (1, *N = 1547*) = 5.6, p = .005]. The fact that older people more often prefer an apartment is probably related to the (expected) decreasing mobility. People that will be living alone prefer an apartment as well (55,1%), while couples prefer an one-family house (53,0%) [X^2 (1, *N = 1329*) = 8.0, p = .005]. This cannot be explained by a difference in age distribution, as the age distribution of the two groups is not significantly different.

7.3.3. Housing surface and number of rooms

The most desired housing surface is 80 to 120 square meters. The youngest age group has more people that want to live in a house that is bigger than 120 square meters than the other age groups [X^2 (4, *N = 1486*) = 15.0, p = .005]. As people get older, they more often desire a lower number of rooms than four [X^2 (4, *N = 1541*) = 39.0, p < .001]. Furthermore, people that will live together after they move more often desire a bigger house than people that will live on their own [X^2 (2, *N = 1278*) = 41.1, p < .001] and mostly desire four rooms, while the people living on their own mostly desire less than four rooms [X^2 (4, *N = 1329*) = 34.2, p < .001]. People that want to move to an apartment are more often looking for a smaller house [X^2 (2, *N = 1467*) = 51.5, p < .001] and less rooms [X^2 (2, *N = 1518*) = 95.3, p < .001] than people that want to move to an one-family house. The same effect can be seen for rental and owner-occupied houses, as most people that want to rent are looking for a multiple-family house [X^2 (2, *N = 1486*) = 77.1, p < .001; X^2 (2, *N = 1536*) = 34.1, p < .001].

11,4% of the respondents wants to move to a bigger house than their current one, 38,3% to a smaller one, the remaining 50,3% wants to move to a house with the same surface or is unknown. 10,8% of the people wants to move to a house with more rooms than their current house, 52,9% to a house with fewer rooms, 15,5% to a house with the same number of rooms and 20,7% is unknown. The number of people that wants to move to a bigger house [X^2 (4, *N = 1570*) = 30.2, p < .001] and the number of people that wants to move to a house with more rooms [X^2 (6, *N = 1570*) = 14.8, p = .021] decreases with age, the number of people that wants to move to a smaller house and to a house with less rooms increases with age. Especially people that want to move from an owner-occupied to a rental dwelling want to live smaller [X^2 (2, *N = 1359*) = 12.2, p = .002] and people that want to move from a rental to an owner-occupied dwelling want to live bigger [X^2 (2, *N = 211*) = 8.4, p = .015].

A last thing that stood out on the housing surface theme is that people that are living in a multiple-family dwelling are generally looking for smaller houses than people that are living in an one-family dwelling [X^2 (2, *N = 1481*) = 24.3, p < .001]. This is probably because people that live in multiple-family houses are used to living smaller than people that live in one-family houses [X^2 (2, *N = 1509*) = 171.0, p < .001]. However, people that are living in multiple-family houses are more often looking for houses that are bigger than their current house and people living in one-family houses are more often looking for houses that are smaller than their current house [X^2 (2, *N = 1565*) = 120.8, p < .001].

7.3.4. Housing that is suitable for elderly people

Most people in all age groups want to move to housing that is suitable for elderly people. However, the people in the youngest age group do have this desire less often than the older age groups [X^2 (4, *N = 1570*) = 50.4, p < .001]. Mobile people also have this desire less often than people that are not mobile anymore [X^2 (2, *N = 1570*) = 19.9, p < .001]. Looking at the prices respondents are willing to pay for their future house, it stands out that people that want to pay the least are the people that most say they want to move to housing that is suitable for elderly people (81,4%) and the people that are willing to pay most do have this preference the least (69,4%) [X^2 (4, *N = 1486*) = 23.0, p = .007]. People that want to move to an apartment more often want housing that is suitable for elderly people than people that want to move to an one-family house [X^2 (2, *N = 1547*) = 47.8, p < .001]. As apartments in general are more suitable for elderly people, people that want suitable housing for elderly people may prefer this housing type. The last thing that stands out is that people that currently own a dwelling more often are looking for housing that is suitable for elderly people than people that currently rent a dwelling [X^2 (2, *N = 1570*) = 23.8, p < .001]. A possible explanation for this is that most of them want to purchase a new dwelling. For people in owner-occupied houses, it is harder to move houses when health decreases than for people in rental houses.

7.3.5. Acceptable price

Most respondents find a medium price for their future dwelling acceptable. People that want to move to an one-family dwelling are willing to pay a little more than people that want to move to an apartment [X^2 (2, *N = 1486*) = 17.5, p < .001]. A few groups are only willing to pay a low price. These will shortly be mentioned. The respondents that are not mobile are willing to pay less than people that are mobile. This is not surprising as their income is lower as well [X^2 (3, *N = 1240*) = 14.5, p = .002]. However, this is not significant and therefore possibly does not apply to the total population. People that currently live in rental houses are willing to pay less than people that live in owner-occupied houses, for a significance level of 0.1 [X^2 (2, *N = 1486*) = 6.0, p = .051], probably because they have built up less equity. Lastly, people that are looking for a house for their own are willing to pay less than couples that are looking for new housing [X^2 (2, *N = 1281*) = 36.6, p < .001].

7.3.6. Building heights

Most respondents prefer building heights in the neighbourhood up to four storeys over a mix of building heights. Only people that want to move to multiple-family houses prefer a mix of building heights [*t*(1438) = -22.625, p < .001]. This is not surprising as apartments are more represented in these type of neighbourhoods. The groups that consist for a great deal of people that want to move to apartments therefore have a less strong preference for building heights up to four storeys. Examples of these kind of groups are older age groups[[F(2,1459) = 10,5, p < 0,001], less mobile people [*t*(1460) = -2,363, p = .018] and people that want to move to rental dwellings [*t*(1460) = 5.220, p < .001].

7.3.7. Acceptable door to door distance to health facilities

Most respondents find a distance of 500 to 1000 meters an acceptable distance to health facilities. However, more people only find a shorter distance acceptable as they get older [X^2 (4, *N = 1476*) = 65.0, p < .001] or less mobile [X^2

(2, *N = 1476*) = 19.9, p < .001]. Because these people often live in or want to move to multiple-family houses, this effect is also visible in those two groups [X^2 (2, *N = 1472*) = 20.9, p < .001; X^2 (2, *N = 1476*) = 9.5, p = .008].

7.3.8. Contact with neighbours

People aged 55 years and older prefer a lot of privacy over a lot of contact with neighbours. However, for not-mobile people this preference is only really small [*t*(1488) = -2,127, p = .034]. The more people are willing to pay more for their dwelling, the more they value [F(2,1417) = 9.85, p < 0,001].

7.3.9. Ambiance in the neighbourhood

People aged 55 years and older prefer neighbourhoods with not a lot of people and little activity on the streets over neighbourhoods with a lot of people and much activity on the streets. This preference seems to become less strong as people get older, although only for a significance level of 0.1 [F(2,1501) = 2.67, p = .069]. People that now live in one-family houses or want to move to one-family houses have a stronger preference for the quieter neighbourhoods [*t*(1498) = 2.020, p = .030; *t*(1482) = -6.337, p = .004].

7.3.10 Desired age composition in the neighbourhood

In general, people aged 55 years and older desire neighbourhoods with people of multiple age groups over neighbourhoods with only people of the same age groups. This preference is strongest for people living in one-family houses, although only for a significance level of 0.1, [*t*(1467) = -.975, p = .055] and owner-occupied houses[*t*(1471) = .696, p = .041]. These people live in the less urban areas [one-family houses: X^2 (4, *N = 1495*) = 222.8, p < .001; owner-occupied houses: X^2 (4, *N = 1499*) = 20.4, p < .001] in which most families live and therefore are probably used to living between people of multiple age groups.

7.4. Conclusion

In this chapter, it became clear that the most important reason to move for the respondents of this survey is that their current dwelling does not suffice their desires/ demands anymore. most people prefer an owner-occupied one-family house that is suitable for elderly people, with a surface of 80 to 120 square meters and four rooms. They prefer a neighbourhood in which the buildings are mainly low (a maximum of four storeys), where not a lot of people are on the streets and not a lot of activities take place, where people of different ages live and where they can find a lot of privacy. They find a distance of 500 to 1000 meters to health facilities acceptable and are willing to pay a medium price for their desired dwelling. Looking at different subgroups, the main preference often stays the same, although some different accents and trends can be found. This is mostly found in subgroups based on age, mobility, household composition, current tenure and housing type, desired tenure and housing type and willingness to pay.

8. Importance of qualities

Now that the different subgroups and housing preferences are known, in this chapter the fifth and last sub question: 'What are the most important housing and vicinity qualities for the different Dutch 55 years and older groups that are willing to move to a private rental or owner-occupied dwelling?' will be answered. This will be done by the conjoint analysis. The last chapter made clear that groups based on age, mobility, household composition, current tenure and housing type, desired tenure and housing type and willingness to pay show differences in preferences. However, the current tenure and current housing type groups will not be elaborated, as the focus in newly built housing projects is on household characteristics and future housing desires. The willingness to pay groups will not be elaborated as well, as too many betas are not significant. The other groups will be elaborated and, if interesting, combined.

First, the whole sample and different age groups will be elaborated upon their housing preferences, the importance of different housing attributes in their housing choice, their valuation of the ranked profiles, their willingness to pay and trade-offs that they make. After this, the main findings of the mobility groups, household composition groups and groups that want to purchase a dwelling will be discussed, in that order. After concluding the chapter, an answer can be given to the main question of the research.

8.1. Age

8.1.1. Conjoint analysis

The appreciation model of the entire sample, according to the ranking task, can be found in table 8.1. It is plausible that the outcome of this model is influenced by the composition of the sample, as the sample is not completely representative for the population (see table 7.2). To prevent the results from being unrepresentative, this is one extra reason to make a distinction between different subgroups.

The model consists of ten attributes, which are introduced in table 6.1. The composition of the neighbourhood is not taken into account, as the outcome is neither in the overall model, nor in the age group models significant or of importance. p = 0,390 is the lowest significance score and 2,7% is the highest importance.

The sample prefers an owner-occupied apartment with a surface of 130 square meters and four rooms, that is suitable for elderly people and has a low price, as these levels have the highest part-worth utility for every attribute. However, a surface of 100 square meters and a middle price are also judged above average, because these have a positive part-worth utility. What stands out is that more or fewer rooms both are appreciated almost equally less, although this is only significant for a significance level of 90%. The preferred vicinity qualities are low building heights, health facilities within 500 meters, a lot of privacy and a quiet neighbourhood. Although a distance to health facilities between 500 and 1000 meters is not significant, the other distances are, so that can be concluded that health facilities more than 1000 meter from the dwelling are least preferred. However, it cannot be concluded whether a distance of 500 to 1000 meters is positively perceived.

The degree of importance of the different housing attributes is calculated by taking the range of the part-worth utilities of one attribute and divide it by the ranges of all attributes together. All degrees of importance together therefore are 100%. The attribute with the biggest role in the housing choice is the price. Followed by whether the house is suitable for elderly people, the surface of the house, whether it is an owner-occupied or rental dwelling and the amount of contact with neighbours, in that order. Four of the five biggest influences are housing qualities. From the calculations, it becomes clear that 78,7% of the housing choice is based on housing qualities and only 21,3% on vicinity qualities.

Comparing the outcomes of the ranking-task, which can be found in table 8.1 till 8.4, to outcomes of the rating-task, which can be found in appendix F, it can be concluded that the importance of the different housing qualities in both tasks are comparable, but that big differences between the two tasks can be found in the importance of the different vicinity qualities. This expected to be because within the ranking task people focus on the housing qualities and therefore (some of the) vicinity qualities are less deliberated. Although the vicinity qualities are less considered in the ranking task and therefore do not reflect the real importance compared to each other, the preferences that are found match in both tasks and give a clear insight in the way people make choices. Therefore using the analysis on the ranking tasks as a basis suffices and will be done.

The appreciation model for people aged 55-64 is added in table 8.2. Looking at this table, a few shifts in preferences can be found. The total group has a preference for an apartment, where the 55-64 age group prefers an one-family house. This is also found in the traditional survey part. A housing surface of 130 square meters is still desired. However, it is not clear whether a surface of 100 square meters is still positively received. The part-worth utility for this level is still slightly positive, but not significant. The same goes for the low price, which is still preferred, and the middle price, which is only significant for a significant level of p=0,10. Having four rooms still seems to be the preferred amount, although this is not significant. The utilities of four and five rooms are really close to each other, which means that five rooms could be preferred if another sample would be used.

Table 8.1. The appreciation model for housing and vicinity qualities, according to the ranking-task.

Variable	B	Std. Error	Sign.	importance	
Tenure				12,3%	
owner-occupied	0,213	0,018	0,000		
rental	-0,213	0,018	0,000		
Housing type				3,2%	
one-family house	-0,056	0,018	0,002		
apartment	0,056	0,018	0,002		
Housing surface				14,2%	
70 sqm	-0,269	0,025	0,000		
100 sqm	0,047	0,024	0,045		
130 sqm	0,222	0,024	0,000		
Number of rooms				3,6%	
3 rooms	-0,043	0,024	0,072*		
4 rooms	0,082	0,024	0,001		
5 rooms	-0,039	0,024	0,105*		
Elderly housing				18,0%	
yes	0,311	0,019	0,000		
no	-0,311	0,018	0,000		
Price				27,4%	+
low class	0,450	0,025	0,000		78,7%
mid class	0,051	0,024	0,036		
high class	-0,501	0,025	0,000		
Building heights				4,7%	
mainly low	0,082	0,018	0,000		
a mix of heights	-0,082	0,018	0,000		
Distance to health facilities				5,9%	
less than 500m	0,108	0,024	0,000		
500m-1000m	-0,010	0,024	0,660*		
more than 1000m	-0,098	0,024	0,000		
Contact with neighbours				7,7%	
a lot of privacy	0,133	0,018	0,000		
a lot of contact with neighbours	-0,133	0,018	0,000		
Ambiance				3,0%	+
quiet	0,052	0,018	0,004		21,3%
lively	-0,052	0,018	0,004		
				100%	100%

*Coefficient B is not significant for a significance level of 95%

The order of the five most important attributes in the housing choice slightly differs, as the rank of the desired housing surface and whether to own or rent switch. The housing type now is the least important attribute. The importance ratio of the housing qualities and vicinity qualities remains almost the same.

Looking at the appreciation for housing qualities of people aged 65-74 in table 8.3, some shifts compared to age group 55-64 have taken place. As expected, apartments now are the most preferred housing type. The preference for a dwelling of 130 square meters is still present, but 100 square meters is valued more positively and is significant. The most popular number of rooms now certainly is four, where five is most negatively judged and three rooms is only slightly negative, although not significant at all. This could mean that three rooms would be judged positively in another or bigger sample. In this age group, the desired ambiance is almost indifferent (with a difference of 0,00081) and therefore does not seem to influence the housing choice.

The four most important qualities in their housing choice correspond with the outcome of the entire group: price, whether the house is suitable for elderly people, the housing surface and the tenure. After that, housing type is the most important quality. For the total group this was ranked ninth and for the age group 55-64 even last. So the five most important qualities for age group 65-74 are all housing qualities. This is also expressed in the importance ratio of the housing qualities and vicinity qualities, as the ratio becomes bigger.

As explained before, the desired amount of respondents per subgroup is 200 (Orme, 2011). For the subgroup of people aged 75 years and older, this amount is not reached. More respondents could have led to more significant outcomes. Now, the outcomes of only two attributes are significant. The results of this group are presented in table 8.4.

Table 8.2. The appreciation model for housing and vicinity qualities of people aged 55-64, according to the ranking task.

Variable	B	Std. Error	Sign.	importance	
Tenure				15,7%	
owner-occupied	0,297	0,025	0,000		
rental	-0,297	0,025	0,000		
Housing type				2,6%	
one-family house	0,049	0,024	0,045		
apartment	-0,049	0,024	0,045		
Housing surface				14,5%	
70 sqm	-0,281	0,034	0,000		
100 sqm	0,015	0,032	0,655*		
130 sqm	0,266	0,032	0,000		
Number of rooms				3,0%	
3 rooms	-0,070	0,033	0,036		
4 rooms	0,044	0,032	0,178*		
5 rooms	0,026	0,033	0,436*		
Elderly housing				16,0%	
Yes	0,302	0,025	0,000		
No	-0,302	0,025	0,000		
Price				27,1%	+
low class	0,483	0,034	0,000		78,8%
mid class	0,058	0,033	0,080*		
high class	-0,541	0,034	0,000		
Building heights				3,7%	
mainly low	0,071	0,024	0,004		
a mix of heights	-0,071	0,024	0,004		
Distance to health facilities				3,9%	
less than 500m	0,084	0,034	0,013		
500m-1000m	-0,019	0,033	0,571*		
more than 1000m	-0,065	0,033	0,049		
Contact with neighbours				8,6%	
a lot of privacy	0,163	0,025	0,000		
a lot of contact with neighbours	-0,163	0,025	0,000		
Ambiance				4,9%	+
quiet	0,092	0,025	0,000		21,2%
lively	-0,092	0,025	0,000		
				100%	100%

*Coefficient B is not significant for a significance level of 95%

Table 8.3. The appreciation model for housing and vicinity qualities of people aged 65-74, according to the ranking-task.

Variable	B	Std. Error	Sign.	importance	
Tenure				8,8%	
owner-occupied	0,157	0,028	0,000		
rental	-0,157	0,028	0,000		
Housing type				8,5%	
one-family house	-0,151	0,029	0,000		
apartment	0,151	0,029	0,000		
Housing surface				11,6%	
70 sqm	-0,248	0,040	0,000		
100 sqm	0,082	0,038	0,032		
130 sqm	0,166	0,039	0,000		
Number of rooms				6,2%	
3 rooms	-0,006	0,039	0,885*		
4 rooms	0,113	0,039	0,003		
5 rooms	-0,107	0,040	0,006		
Elderly housing				18,2%	
yes	0,325	0,030	0,000		
no	-0,325	0,030	0,000		
Price				27,1%	+
low class	0,464	0,040	0,000		80,3%
mid class	0,041	0,039	0,282*		
high class	-0,505	0,040	0,000		
Building heights				6,1%	
mainly low	0,109	0,029	0,000		
a mix of heights	-0,109	0,029	0,000		
Distance to health facilities				8,2%	
less than 500m	0,155	0,039	0,000		
500m-1000m	-0,018	0,038	0,641*		
more than 1000m	-0,137	0,040	0,001		
Contact with neighbours				5,4%	
a lot of privacy	0,096	0,029	0,001		
a lot of contact with neighbours	-0,096	0,029	0,001		
Ambiance				0,0%	+
quiet	0,000	0,029	0,989*		19,7%
lively	0,000	0,029	0,989*		
				100%	100%

*Coefficient B is not significant for a significance level of 95%

The first thing that stands out, is that the group has a slight preference for a rental dwelling. All other groups prefer an owner-occupied house. However, this outcome is not significant and therefore cannot be acknowledged. Fact is that according to WoON (2018) and the traditional survey part, this group still prefers an owner-occupied house. However, the outcome of the conjoint analysis is a weighted preference, which is asked in combination with other attributes. Like the total and 55-64 group, the preferred housing surface is 130 square meters, a surface of 100 square meters is interpreted as a positive quality as well, but is not significant. At least, it is clear that they do not fancy a surface of 70 square meters. The desired number of rooms is four. The valuation of another number of rooms is not clear, although five rooms seems to be the least favourite. People still prefer a neighbourhood with predominantly low-rise buildings, although the preference becomes less strongly. An explanation is that more people

want to move to apartments and those can more often be found in a neighbourhood with mixed building heights. The data on distance to health facilities is not significant, but the preference seems to be comparable to that in the other age groups. Lastly, whether they want a quiet or lively neighbourhood is also not significant, but in the sample a quiet neighbourhood seems to be appreciated. This was also the case for the other age groups.

The 75+ age group is the only group for whom price is not the most important quality in their housing choice. The most important quality is the suitability for elderly people. After this, housing type is most important, for the 55-64 this was the least important quality, after that price, housing surface and number of rooms. For this group, the housing qualities are more important in their housing choice than for the younger age groups. However, for every group the six housing qualities are about four times as important as the four vicinity qualities.

Table 8.4. The appreciation model for housing and vicinity qualities of people aged 75 or older, according to the ranking-task.

Variable	B	Std. Error	Sign.	importance	
Tenure				0,1%	
owner-occupied	-0,002	0,064	0,997*		
rental	0,002	0,064	0,997*		
Housing type				19,5%	
one-family house	-0,328	0,067	0,000		
apartment	0,328	0,067	0,000		
Housing surface				15,4%	
70 sqm	-0,286	0,094	0,002		
100 sqm	0,052	0,087	0,554*		
130 sqm	0,234	0,091	0,010		
Number of rooms				10,2%	
3 rooms	-0,058	0,086	0,498*		
4 rooms	0,201	0,090	0,025		
5 rooms	-0,143	0,089	0,107*		
Elderly housing				22,0%	
yes	0,371	0,071	0,000		
no	-0,371	0,071	0,000		
Price				15,6%	+
low class	0,217	0,093	0,019		82,9%
mid class	0,092	0,095	0,333*		
high class	-0,309	0,089	0,001		
Building heights				1,5%	
mainly low	0,025	0,067	0,705*		
a mix of heights	-0,025	0,067	0,705*		
Distance to health facilities				6,3%	
less than 500m	0,082	0,086	0,344*		
500m-1000m	0,050	0,089	0,572*		
more than 1000m	-0,132	0,089	0,137*		
Contact with neighbours				6,9%	
a lot of privacy	0,116	0,067	0,085*		
a lot of contact with neighbours	-0,116	0,067	0,085*		
Ambiance				2,4%	+
quiet	0,040	0,066	0,611*		17,1%
lively	-0,040	0,066	0,611*		
				100%	100%

*Coefficient B is not significant for a significance level of 95%

8.1.2. Comparing to traditional survey

As explained in chapter 7, the scope of some of the questions of the traditional survey and the conjoint measurement differ, which could have let to different outcomes. In this section, the outcomes that cannot be explained by the difference is scope will be elaborated.

According to the traditional survey, most respondents of all age groups prefer an owner-occupied house. The percentage of people that prefers this decreases as age increases. In the conjoint analysis, the oldest age group seems to prefer a rental house, although this is not significant. This difference can be explained by the limited importance of this attribute compared to the other attributes for this group. The desired housing surface according to the traditional survey is 80-120 square meters. In the conjoint analysis, 130 square meters is most preferred. However, 100 square meters, which is in the range of the preference in the traditional survey, is also positively valued in the conjoint analysis. Multiple possible explanations for this difference can be found. If people want a surface in the higher region of the 80-120 range, they probably rather choose for a higher surface (130), than a lower surface (100). Next to that, in the traditional survey, the preferred surface is independently asked, during the conjoint task, respondents connect the surface to for example the housing type and number of rooms and therefore reconsider the best surface. Due to the different way of questioning, the outcome of the price and distance to health facilities do not match.

No discrepancies are found in the other attributes. Therefore, the conjoint analysis does not have very surprising preference outcomes.

8.1.3. Attribute importance

Looking at the importance of the different qualities in the housing choice of the different age groups, a few things stand out. Price has the same, and most, importance for the 55-64 and 65-74 group, but attenuates in the 75+ group. The importance of suitable housing for elderly people increases by age and is the most important quality in the 75+ age group. Tenure is quite important for the youngest age group, the group that prefers to own a dwelling, as a third-ranked quality, but sinks to the least important quality for the 75+ group, the group that wants to rent. Housing type goes the other way around and rises from the least important quality for the youngest group, the group that wants an one-family house, to the second most important quality for the oldest group, the people that want an apartment. The importance of housing surface seems to be stable through the age groups, where the importance of the number of rooms increases a little. The importance ranking, an overview of the most till least important attribute in the housing choice of a group, of the different age groups can be found in table 8.5. The total group is taken as a basis. The table shows how the 55-64 years old group differs from the total group and which changes take place as people get older.

Table 8.5. The importance ranking of the attributes for the different age groups.

Total	55-64		65-74		75+	
Price	– Price		– Price		↑ Elderly housing	+1
Elderly housing	– Elderly housing		– Elderly housing		↑ Housing type	+3
Housing surface	↑ Tenure	+1	↑ Housing surface	+1	↓Price	-2
Tenure	↓ Housing surface	-1	↓ Tenure	-1	↓ Housing surface	-1
Contact with neighbours	– Contact with neighbours		↑ Housing type	+5	↑ Number of rooms	+2
Distance to health facilities	↑ Ambiance	+4	↑ Distance to health facilities	+1	↑ Contact with neighbours	+3
Building heights	↓ Distance to health facilities	-1	↑ Number of rooms	+2	↓ Distance to health facilities	-1
Number of rooms	↓ Building heights	-1	– Building heights		↑ Ambiance	+2
Housing type	↓ Number of rooms	-1	↓ Contact with neighbours	-4	↓ Building heights	-1
Ambiance	↓ Housing type	-1	↓ Ambiance	-4	↓ Tenure	-6

As explained before, In the ranking task both housing and vicinities were measured together. The vicinity qualities score low in relative importance. Vicinity qualities can therefore have been overshadowed by housing qualities. To understand the preferences within the vicinity qualities better, an equivalent table about the outcome of the rating task for vicinity qualities is added below. In the rating task, the composition of the neighbourhood is taken into account as well. Its attribute levels are not significant, but the attribute seems to be taken into account during the rating task. The original appreciation models are added in appendix F.

Building heights and distance to health facilities had a higher share in the valuation of the profiles for the 65-74 age group compared to the valuation of the 55-64 group. The desired contact with neighbours, whether they

prefer a quiet or lively neighbourhood and the age composition of the neighbourhood, on the other side, had a lower share. However, in the importance ranking, no differences can be found. This is another story for the 75+ group. As older people are more likely to get health problems, distance to health facilities is the most important quality for people aged 75 years and older. After that, living in a quiet neighbourhood is found to be really important to this age group. The importance of the composition of the neighbourhood also seems to be increasing a lot, although this value is not significant. On the other side, the building heights become less important, probably because of the higher share of people that prefers apartments and especially the importance of the degree of contact with neighbours weakens, which means that they find privacy relatively less important in their housing choice.

Table 8.6. The importance ranking of the different vicinity attributes for the different age groups based on the rating model.

Total	55-64 & 65-74	75+	
Building heights	– Building heights	↑ Distance to health facilities	+3
Contact with neighbours	– Contact with neighbours	↑ Ambiance	+1
Ambiance	– Ambiance	↓ Building heights	-2
Distance to health facilities	– Distance to health facilities	↑ Composition of the neighbourhood	+1
Composition of the neighbourhood	– Composition of the neighbourhood	↓ Contact with neighbours	-3

8.1.4. Valuation of profiles

The respondents have valued 27 profiles. With the help of the part-worth utilities that are calculated in the analysis, it is possible to calculate the total utility of every profile. With these numbers, it is possible to rank the most to the least preferred profile. This is shown in table 8.7 for the whole sample. This table also shows the utility of the most and least preferred combination of attribute levels. The positive part-worth utilities are valued above average, the negative part-worth utilities are valued below average.

What stands out from this table is that two times, two profiles have almost an equal utility. (1) Profile 3 has an utility of 0,077 and profile 12 has an utility of 0,070. (2) Profile 26 has an utility -0,486 and profile 25 has an utility of -0,487. This means that the respondents value these profiles about the same and the sample is almost indifferent about to which one they would move. In the first example, four utility levels differ. This means that a 70 square meters apartment with 4 rooms and a door to door distance of 500-1000 meters to health facilities is valued about the same as a 100 square meters one-family house with three rooms and a door to door distance of more than 1000 meters to health facilities. In the second example, seven utility levels differ. With this amount of differences, it becomes hard to make an expressive comparison. Next to that, a lot of combinations of attribute levels are not being asked to the respondents because that would become too extensive. Therefore probably more interchangeable combinations of attribute levels are not being analysed. To overcome these limitations, an analysis on the willingness to pay for the housing qualities is performed as well.

8.1.5. Willingness to pay

Because the price attribute was added to the ranking task and housing quality construct, it is possible to calculate the willingness to pay for a certain quality change. The importance of the different qualities plays a role in this calculation. As the vicinity qualities in the ranking task seem to be taken into account to a lesser extent, these most possibly do not reflect the actual willingness to pay. Therefore the focus will lie on the housing qualities. As these are also questioned separately in the housing construct, the rating models will be used as a basis.

The willingness to pay is the price one is willing to pay extra for a change in attribute level. This can be calculated in three steps. (1) dividing the price range between the lowest and highest price by the part-worth utility range of the price attribute, (2) calculating the part-worth utility range between the current attribute level and the level to which it is changing, (3) multiplying step a with step b.

In calculating the willingness to pay in this research, some problems pop up. The residential profiles consisted of rental or owner-occupied dwellings. For both, other prices were included. Next to that, the height of the prices was not only dependent on the tenure and attribute level, but also on the province in which the respondent wanted to live, as price levels differ between different locations. To be able to make general statements on the willingness to pay, one table with coefficients is developed (table 8.8). The coefficients are found by calculating the part-worth utility range between the current attribute level and the level to which it is changing and dividing this by the part-worth utility range of the price attribute. To find the real willingness to pay, these coefficients have to be multiplied by the desired value in table 8.9, which are the used owner-occupied and rental price ranges for every province.

Table 8.7. The utilities of the most preferred dwelling, the least preferred dwelling and the valued profiles.

rank	profile	utility
#	apartment, owner-occupied, low price, 130 sqm, 4 rooms, suitable for elderly people, less than 500m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	1,543
1	1 - one-family house, owner-occupied, low price, 130 sqm, 4 rooms, suitable for elderly people, more than 1000m distance to health facilities, mainly low buildings, lively neighbourhood, a lot of privacy	1,288
2	10 - apartment, owner-occupied, mid price, 130 sqm, 5 rooms, suitable for elderly people, less than 500m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	1,187
3	17 - one-family house, owner-occupied, mid price, 130 sqm, 5 rooms, suitable for elderly people, less than 500m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	1,075
4	14 - one-family house, owner-occupied, low price, 70 sqm, 3 rooms, suitable for elderly people, less than 500m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	0,980
5	23 - apartment, owner-occupied, low price, 100 sqm, 5 rooms, suitable for elderly people, 500m-1000m distance to health facilities, mainly low buildings, lively neighbourhood, a lot of contact with neighbours	0,925
6	11 - one-family house, rental, low price, 130 sqm, 4 rooms, suitable for elderly people, more than 1000m distance to health facilities, a mix of building heights, quiet neighbourhood, a lot of privacy	0,802
7	2 - one-family house, rental, low price, 100 sqm, 5 rooms, suitable for elderly people, 500m-1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	0,756
8	20 - apartment, owner-occupied, low price, 70 sqm, 3 rooms, suitable for elderly people, less than 500m distance to health facilities, a mix of building heights, quiet neighbourhood, a lot of contact with neighbours	0,662
9	18 - apartment owner-occupied, low price, 130 sqm, 4 rooms, not suitable for elderly people, more than 1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of contact with neighbours	0,615
10	19 - apartment, owner-occupied, mid price, 100 sqm, 3 rooms, suitable for elderly people, more than 1000m distance to health facilities, a mix of building heights, lively neighbourhood, a lot of privacy	0,537
11	6 - one-family house, owner-occupied, high price, 100 sqm, 4 rooms, suitable for elderly people, less than 500m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	0,471
12	9 - one-family house, owner-occupied, low price, 100 sqm, 5 rooms, not suitable for elderly people, 500m-1000m distance to health facilities, a mix of building heights, quiet neighbourhood, a lot of privacy	0,397
13	8 - one-family house, owner-occupied, mid price, 70 sqm, 4 rooms, suitable for elderly people, 500m-1000m distance to health facilities, a mix of building heights, lively neighbourhood, a lot of privacy	0,321
14	21 - one-family house, owner-occupied, high price, 130 sqm, 3 rooms, suitable for elderly people, 500m-1000m distance to health facilities, mainly low buildings, lively neighbourhood, a lot of privacy	0,299
15	3 - apartment, owner-occupied, mid price, 70 sqm, 4 rooms, not suitable for elderly people, 500m-1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	0,077
16	12 - one-family house, owner-occupied, mid price, 100 sqm, 3 rooms, not suitable for elderly people, more than 1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	0,070
17	5 - one-family house, owner-occupied, high price, 100 sqm, 4 rooms, suitable for elderly people, less than 500m distance to health facilities, a mix of building heights, quiet neighbourhood, a lot of contact with neighbours	0,042
18	15 - one-family house, rental, mid price, 100 sqm, 3 rooms, suitable for elderly people, more than 1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of contact with neighbours	0,000
19	4 - apartment, rental, high price, 130 sqm, 3 rooms, suitable for elderly people, 500m-1000m distance to health facilities, a mix of building heights, quiet neighbourhood, a lot of privacy	-0,075
20	7 - one-family house, rental, mid price, 70 sqm, 4 rooms, suitable for elderly people, 500m-1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of contact with neighbours	-0,105
21	27 - one-family house, rental, low price, 70 sqm, 3 rooms, not suitable for elderly people, less than 500m distance to health facilities, mainly low buildings, lively neighbourhood, a lot of privacy	-0,171
22	26 - one-family house, owner-occupied, high price, 130 sqm, 3 rooms, not suitable for elderly people, 500m-1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of contact with neighbours	-0,486
23	25 - apartment, rental, high price, 70 sqm, 5 rooms, suitable for elderly people, more than 1000m distance to health facilities, mainly low buildings, quiet neighbourhood, a lot of privacy	-0,487
24	16 - one-family house, rental, mid price, 130 sqm, 5 rooms, not suitable for elderly people, less than 500m distance to health facilities, a mix of building heights, lively neighbourhood, a lot of contact with neighbours	-0,505
25	13 - one-family house, owner-occupied, high price, 70 sqm, 5 rooms, suitable for elderly people, more than 1000m distance to health facilities, mainly low buildings, lively neighbourhood, a lot of contact with neighbours	-0,542
26	24 - apartment, rental, high price, 100 sqm, 4 rooms, not suitable for elderly people, less than 500m distance to health facilities, mainly low buildings, lively neighbourhood, a lot of privacy	-0,568
27	22 - one-family house, owner-occupied, high price, 70 sqm, 5 rooms, not suitable for elderly people, more than 1000m distance to health facilities, a mix of building heights, quiet neighbourhood, a lot of privacy	-0,958
#	one-family house, rental, high price, 70 sqm, 3 rooms, not suitable for elderly people, more than 1000m distance to health facilities, a mix of building heights, lively neighbourhood, a lot of contact with neighbours	-1,757

Table 8.8 reads as follows: per attribute, the coefficient tells what people are willing to pay to include the corresponding attribute level instead of the level above. So for a house with four rooms in Groningen, people aged 55-64 are willing to pay 0,155 * 200.000 = € 31.000 more than for a house with three rooms. For a house with five rooms in Groningen, people aged 55-64 are willing to pay -0,050 * 200.000 = - € 10.000 more (read €10.000 less) than for a house with four rooms.

Table 8.8. Willingness to pay coefficients for the different age groups.

	55-64	65-74	75+
Housing type			
one-family house	0	0	0
apartment	-0,126	0,158	0,445
Housing surface			
70 sqm	0	0	0
100 sqm	0,304	0,261	0,629
130 sqm	0,188	0,151	0,076
Number of rooms			
3 rooms	0	0	0
4 rooms	0,155	0,105	0,181
5 rooms	-0,050	-0,209	-0,492
Elderly housing			
yes	0	0	0
no	-0,666	-0,810	-1,157

Table 8.9. Multiplier values for willingess to pay.

	rental	Owner-occupied
Groningen	€200 p/m	€200000
Friesland	€200 p/m	€200000
Drenthe	€200 p/m	€200000
Overijssel	€200 p/m	€200000
Gelderland	€200 p/m	€200000
Utrecht	€350 p/m	€400000
Flevoland	€200 p/m	€200000
Noord-Holland	€550 p/m	€400000
Zuid-holland	€350 p/m	€400000
Zeeland	€200 p/m	€200000
Noord-Brabant	€350 p/m	€200000
Limburg	€200 p/m	€200000

From this, it can be concluded that people aged 55-64 are willing to pay more for an one-family house than for an apartment. For the people aged 65 and older this is the other way around. All age group are willing to pay more for an extra amount of surface. People aged 55-64 want to pay most for an amount of four rooms and least for an amount of three rooms. People aged 65 years and older want to pay most for an amount of four rooms and least for an amount of five rooms. All people want to pay more for a dwelling that is suitable for elderly people. These are not surprising results, as they are the same preferences that are also found in table 8.2, 8.3 and 8.4. It becomes more interesting when the willingness to pay for different combinations of qualities is analysed. This is done in table 7.12. Note that the willingness to pay is compared to an one-family house of 70 square meters with three rooms, that is not suitable for elderly people is calculated. The amount of money people are willing to pay for this particular combination of qualities can differ per age group.

The table shows 36 combinations of the housing qualities. For every age group, the fifteen combinations for which they are willing to pay most contain suitability for elderly people. The 55-64 age group is even willing to pay more for all eighteen combinations which are suitable for elderly people than for the combinations which are not suitable for elderly people. With this combination of housing qualities, it is also possible to see which trade-offs people make. This means that you could say for which (at least) two combination of qualities they are willing to pay about the same. Because it would not be interesting to look at trade-offs for combinations that the groups definitely do not want, only the combinations that are valued above average (marked green) will be analysed.

For the 55-64 group, an one-family house with three rooms is valued about the same as an apartment with four of five rooms. Other examples are an apartment of 100 square meters and three rooms that is valued about the same as an one-family house of 70 square meters with one more room and an apartment of 130 square meters with five rooms that is valued about the same is an one-family house of 100 square meters and one room less. For the 65-75 group, an apartment of 100 square meters is valued about the same as an one-family house of 130 square meters. Other examples are an apartment of 70 square meters and four rooms that is valued about the same as an one-family house of 100 square meters with one room less and an apartment of 70 square meters with three rooms that is valued about the same is an one-family house of 100 square meters and two rooms more. For the 75+ group, fewer trade-offs can be found. They only are willing to trade an one-family dwelling of 100 square meters with three rooms for an apartment of 70 square meters with four rooms. This group is more critical and finds it really important to get the housing qualities they prefer.

The willingness to pay more for the most preferred combination of qualities compared to the least preferred combination of qualities increases by age. The corresponding coefficients are 1,439 for the people aged 55-64, 1,588 for the people aged 65-74 and 2,800 for the people aged 75 years and older. What is interesting to mention is that the youngest age groups is willing to pay a coefficient of 0,126 less for the dwelling that is favoured by the older ages groups compared to their own preference. The 65-74 age groups is willing to pay a coefficient of 0,157 less for the dwelling that is favoured by the youngest age group compared to their own preference. For the oldest age group this coefficient is 0,445. The coefficient increases by age. This confirms the increasing importance of offering the right dwellings as people get older.

Table 8.10. The willingness to pay for a combination of the qualities housing type, housing surface, number of rooms and suitability for elderly house per age group. One-family, 70sqm, 3rooms, no is the base combination.

55-64		65-74		75+	
one-family, 130sqm, 4rooms, yes	0,646	apartment, 130sqm, 4rooms, yes	0,675	apartment, 130sqm, 4rooms, yes	1,332
one-family, 130sqm, 5rooms, yes	0,596	apartment, 130sqm, 3rooms, yes	0,570	apartment, 100sqm, 4rooms, yes	1,256
apartment, 130sqm, 4rooms, yes	0,520	apartment, 100sqm, 4rooms, yes	0,525	apartment, 130sqm, 3rooms, yes	1,151
one-family, 130sqm, 3rooms, yes	0,491	one-family, 130sqm, 4rooms, yes	0,518	apartment, 100sqm, 3rooms, yes	1,075
apartment, 130sqm, 5rooms, yes	0,470	apartment, 130sqm, 5rooms, yes	0,467	one-family, 130sqm, 4rooms, yes	0,887
one-family, 100sqm, 4rooms, yes	0,459	apartment, 100sqm, 3rooms, yes	0,419	apartment, 130sqm, 5rooms, yes	0,840
one-family, 100sqm, 5rooms, yes	0,409	one-family, 130sqm, 3rooms, yes	0,412	one-family, 100sqm, 4rooms, yes	0,811
apartment, 130sqm, 3rooms, yes	0,365	one-family, 100sqm, 4rooms, yes	0,367	apartment, 100sqm, 5rooms, yes	0,764
apartment, 100sqm, 4rooms, yes	0,332	apartment, 100sqm, 5rooms, yes	0,316	one-family, 130sqm, 3rooms, yes	0,705
one-family, 100sqm, 3rooms, yes	0,304	one-family, 130sqm, 5rooms, yes	0,309	one-family, 100sqm, 3rooms, yes	0,629
apartment, 100sqm, 5rooms, yes	0,282	apartment, 70sqm, 4rooms, yes	0,263	apartment, 70sqm, 4rooms, yes	0,627
apartment, 100sqm, 3rooms, yes	0,177	one-family, 100sqm, 3rooms, yes	0,261	apartment, 70sqm, 3rooms, yes	0,445
one-family, 70sqm, 4rooms, yes	0,155	one-family, 100sqm, 5rooms, yes	0,158	one-family, 130sqm, 5rooms, yes	0,394
one-family, 70sqm, 5rooms, yes	0,105	apartment, 70sqm, 3rooms, yes	0,158	one-family, 100sqm, 5rooms, yes	0,318
apartment, 70sqm, 4rooms, yes	0,029	one-family, 70sqm, 4rooms, yes	0,105	one-family, 70sqm, 4rooms, yes	0,181
one-family, 70sqm, 3rooms, yes	*0,000*	apartment, 70sqm, 5rooms, yes	0,055	apartment, 130sqm, 4rooms, no	0,175
one-family, 130sqm, 4rooms, no	-0,020	*one-family, 70sqm, 3rooms, yes*	*0,000*	apartment, 70sqm, 5rooms, yes	0,134
apartment, 70sqm, 5rooms, yes	-0,022	one-family, 70sqm, 5rooms, yes	-0,103	apartment, 100sqm, 4rooms, no	0,099
one-family, 130sqm, 5rooms, no	-0,070	apartment, 130sqm, 4rooms, no	-0,135	*one-family, 70sqm, 3rooms, yes*	*0,000*
apartment, 70sqm, 3rooms, yes	-0,126	apartment, 130sqm, 3rooms, no	-0,240	apartment, 130sqm, 3rooms, no	-0,007
apartment, 130sqm, 4rooms, no	-0,146	apartment, 100sqm, 4rooms, no	-0,286	apartment, 100sqm, 3rooms, no	-0,083
one-family, 130sqm, 3rooms, no	-0,175	one-family, 130sqm, 4rooms, no	-0,293	one-family, 130sqm, 4rooms, no	-0,271
apartment, 130sqm, 5rooms, no	-0,197	apartment, 130sqm, 5rooms, no	-0,343	one-family, 70sqm, 5rooms, yes	-0,311
one-family, 100sqm, 4rooms, no	-0,208	apartment, 100sqm, 3rooms, no	-0,391	apartment, 130sqm, 5rooms, no	-0,318
one-family, 100sqm, 5rooms, no	-0,258	one-family, 130sqm, 3rooms, no	-0,398	one-family, 100sqm, 4rooms, no	-0,347
apartment, 130sqm, 3rooms, no	-0,302	one-family, 100sqm, 4rooms, no	-0,444	apartment, 100sqm, 5rooms, no	-0,394
apartment, 100sqm, 4rooms, no	-0,334	apartment, 100sqm, 5rooms, no	-0,494	one-family, 130sqm, 3rooms, no	-0,452
one-family, 100sqm, 3rooms, no	-0,363	one-family, 130sqm, 5rooms, no	-0,501	one-family, 100sqm, 3rooms, no	-0,528
apartment, 100sqm, 5rooms, no	-0,384	apartment, 70sqm, 4rooms, no	-0,547	apartment, 70sqm, 4rooms, no	-0,531
apartment, 100sqm, 3rooms, no	-0,489	one-family, 100sqm, 3rooms, no	-0,549	apartment, 70sqm, 3rooms, no	-0,712
one-family, 70sqm, 4rooms, no	-0,551	one-family, 100sqm, 5rooms, no	-0,652	one-family, 130sqm, 5rooms, no	-0,763
one-family, 70sqm, 5rooms, no	-0,562	apartment, 70sqm, 3rooms, no	-0,652	one-family, 100sqm, 5rooms, no	-0,839
apartment, 70sqm, 4rooms, no	-0,638	one-family, 70sqm, 4rooms, no	-0,705	one-family, 70sqm, 4rooms, no	-0,976
one-family, 70sqm, 3rooms, no	-0,666	apartment, 70sqm, 5rooms, no	-0,755	apartment, 70sqm, 5rooms, no	-1,023
apartment, 70sqm, 5rooms, no	-0,688	one-family, 70sqm, 3rooms, no	-0,810	one-family, 70sqm, 3rooms, no	-1,157
apartment, 70sqm, 3rooms, no	-0,793	one-family, 70sqm, 5rooms, no	-0,913	one-family, 70sqm, 5rooms, no	-1,468

8.2. Mobility

As explained before, the population can be divided into mobile and not-mobile people. Some characteristics of these groups can be found in table 8.11. The not-mobile group is older and has less income than the mobile group. The fact that they have less income can not only be explained by the difference in age composition. Looking at only the youngest age group for example, the same effect can be found. The future household composition shows no notable differences.

Table 8.11. Comparing the mobile and not-mobile group.

	Mobile	Not mobile
Age		
55-64	57,2%	42,0%
65-74	36,1%	48,7%
75+	6,8%	9,3%
Future household composition		
Single person	15,9%	14,3%
Couple	69,5%	74,0%
Single parent and child(ren)	0,5%	1,0%
Couple and child(ren)	4,8%	4,3%
Unknown	9,3%	6,3%
Income		
Less than 1x middle-income	16,9%	20,0%
1-1,5x middle-income	29,1%	38,7%
1,5-2x middle-income	18,3%	19,0%
2x middle-income or more	13,4%	7,0%
Unknown	22,4%	15,3%
n =	1270	300
	76,4%	23,6%

The conjoint analysis for the two groups can be found in appendix G. The housing preferences of mobile and less mobile people for a great deal match each other and the preferences of the total sample. One big difference is that for the not-mobile people, a housing surface of 100 square meters (beta = 0.105, p = 0,052) is valued about the same as a surface of 130 square meters (beta = 0.116, p = 0.035). More not-mobile people are willing to live a little smaller and the housing surface is less important in their housing choice. Table 8.12 shows the importance ranking of the housing attributes for the two different groups and the corresponding share in housing choice. In the ranking of the not-mobile part, it is indicated how this differs from the ranking in the mobile part.

The price is more important in the housing choice of mobile people, while the suitability for elderly people is more important in the housing choice of not-mobile people. The former is somewhat surprising, as not-mobile people have a lower income, the latter was expected, as housing for elderly people basically means housing that eases movements.

Table 8.12. The importance ranking of the attributes for mobile and not-mobile people.

Mobile		**Not mobile**		
Attribute	*Share*	*Attribute*		*Share*
Price	28,5%	– Price		23,1%
Elderly housing	16,9%	– Elderly housing		22,4%
Housing surface	15,3%	↑ Tenure	+1	14,9%
Tenure	11,6%	↓ Housing surface	-1	9,5%
Contact with neighbours	8,8%	↑ Distance to health facilities	+1	7,6%
Distance to health facilities	5,4%	↑ Housing type	+3	5,7%
Building heights	4,8%	↑ Ambiance	+3	5,0%
Number of rooms	3,5%	– Number of rooms		4,4%
Housing type	2,7%	↓ Building heights	-2	4,1%
Ambiance	2,5%	↓ Contact with neighbours	-5	3,2%

Focusing on the vicinity qualities, more interesting results can be found. Distance to health facilities is much more important to not-mobile people. Having a lot of privacy is more important in the housing choice of mobile people than in the housing choice of not-mobile people. It was already found in the traditional survey part that not-mobile people only have a slight preference for a lot of privacy over a lot of contact with neighbours. This could be because people that are not mobile are more dependent on social contact close to their living environment.

Table 8.13. The importance ranking of the different vicinity attributes for mobile and not-mobile people based on the rating model.

Mobile		**Not mobile**		
Attribute	*Share*	*Attribute*		*Share*
Building heights	30,3%	↑ Distance to health facilities	+3	35,1%
Contact with neighbours	25,8%	↓ Building heights	-1	31,4%
Ambiance	23,3%	– Ambiance		19,0%
Distance to health facilities	16,5%	↓ Contact with neighbours	-2	13,5%
Composition of the neighbourhood	4,0%	– Composition of the neighbourhood		1,0%

Due to non-significant outcomes in the rating-task, that differ from the outcomes in the ranking task, a complete list of willingness to pay for different attribute combinations for mobile and not-mobile respondents would not be reliable. However, looking at the housing type, housing surface, number of rooms and suitability for elderly people attributes, still some trade-offs can be found. For the not-mobile group these trade-offs are for combinations that are valued below average and therefore are not worth mentioning. For the mobile people it is okay to trade three rooms for five rooms or a dwelling of 130 square meters with three rooms for a dwelling of 100 square meters with four rooms.

8.3. Household composition

In the survey, questions are asked about whether the respondent will be living with a partner and whether the respondent will be living with children after moving houses. Only 5,8% of the respondents will be living with children, this group is too small to elaborate on. Therefore only a division in single and couple household compositions will be made.

The general characteristics of these groups are written down in table 8.14, only the income is really different between the two groups. The average age of single people is 65,13, the average age of respondents that are part of a couple are 64,88. Looking at the mobility, a little more singles are mobile. This is because mobility covers the mobility of the entire household. The income of singles is clearly lower than the income of couples.

Table 8.14. Comparing the single and couple group.

	Single	Couple
Age		
55-64	48,2%	51,0%
65-74	42,0%	41,5%
75+	9,8%	7,4%
Mobility		
Mobile	82,4%	79,9%
Not mobile	17,6%	20,1%
Income		
Less than 1x middle-income	35,5%	12,2%
1-1,5x middle-income	29,8%	32,0%
1,5-2x middle-income	11,0%	20,6%
2x middle-income or more	5,3%	13,7%
Unknown	18,4%	21,4%
n =	245	1105
	18,1%	81,9%

The main preferences of singles and couples are similar. The conjoint outcomes can be found in the appendix H. The two groups do value the importance of the housing qualities different. Table 8.15 shows the importance ranking of the different attributes for the two groups and the corresponding share in housing choice. Despite the big difference in income, for both groups the price is about equally (and most) important in their housing choice. The fact that couples find it more important that their future dwelling is owner-occupied could be related to their relatively higher income. Other remarkable differences are the importance of the housing surface, housing type and distance to health facilities. Couples find it more important that their house has a big surface. This is not surprising, as the total surface has to be divided among more than one person. Next to that, singles value moving to an apartment more than couples.

Table 8.15. importance ranking of the attributes for singles and couples.

Single		Couple		
Attribute	*Share*	*Attribute*		*Share*
Price	28,3%	– Price		27,2%
Elderly housing	19,5%	– Elderly housing		17,2%
Housing surface	10,2%	– Housing surface		14,9%
Housing type	10,0%	↑ Tenure	+1	12,4%
Tenure	7,1%	↑ Contact with neighbours	+1	7,3%
Contact with neighbours	7,0%	↑ Distance to health facilities	+2	5,8%
Building heights	6,6%	– Building heights		4,4%
Distance to health facilities	5,8%	↓ Housing type	-4	4,0%
Number of rooms	4,9%	– Number of rooms		3,9%
Ambiance	0,6%	– Ambiance		2,9%

What does not becomes clear in table 8.15, but can be found in table 8.16, is the higher importance of little distance to health facilities for singles compared to couples. This could be explained by the higher dependence on nearby services in case singles have decreasing mobility, as couples easier can fall back upon each other.

Table 8.16. The importance ranking of the different vicinity attributes for singles and couples based on the rating model.

Single		Couple		
Attribute	*Share*	*Attribute*		*Share*
Building heights	27,5%	– Building heights		30,4%
Distance to health facilities	26,0%	↑ Contact with neighbours	+2	24,4%
Ambiance	22,9%	– Ambiance		23,3%
Contact with neighbours	20,1%	↓ Distance to health facilities	-2	18,9%
Composition of the neighbourhood	3,5%	– Composition of the neighbourhood		3,1%

Like was the case for the mobile and not-mobile groups, due to non-significant outcomes in the rating-task that differ from the outcomes in the ranking task, a complete list of willingness to pay for different attribute combinations for single and couple respondents would not be reliable. However, for couples one clear trade-off can be found. They are willing to pay the same amount of money for a dwelling with three rooms as they are willing to pay for a dwelling with five rooms.

8.4. Desired owner-occupied dwelling

The greatest part of the business model of BPD is focused on selling houses. Therefore, housing purchasers is an interesting group to elaborate on. In this last part of this chapter, no distinction between household characteristics will be made, but a distinction in housing preferences. The housing preferences of people that want to move to an owner-occupied one-family house and the people that want to move to an owner-occupied multiple-family house will be compared. Looking at the differences in characteristics of these two groups in table 8.17, one can see clear differences between the two groups. The people that want to move to an one-family house are younger, (62,72 versus 65,81), are relatively less often single households, are relatively more often mobile and on average have a higher income.

The conjoint analyses for these groups can be found in appendix I. People that want an owner-occupied dwelling and prefer a multiple-family dwelling value a surface of 100 square meters above average, while people that prefer an one-family dwelling value this below average (although not significant). However, the housing surface is about equally important for both groups in their housing choice. For a lot of other attributes, the importance clearly differs. The two groups are selected upon their desired ownership and housing type. However, having an owner-occupied dwelling is only found in the top two most important attributes for people that want to move to one-family houses. People that want to move to multiple-family houses thus are more inclined to nevertheless move to a rental dwelling. The housing type can only be found in the top two most important attributes for people that want to move to a multiple-family house. People that want to move to an one-family house therefore are more inclined to switch to

an apartment than the other way around. Furthermore, the price is more important in the housing choice of people that want to move to a multiple-family house, as their income is also lower.

Table 8.17. Comparing the people that want an owner-occupied one-family dwelling and the people that want an owner-occupied multiple-family dwelling.

	One-family house	Multiple-family house
Age		
55-64	65,2%	44,1%
65-74	30,0%	47,3%
75+	4,8%	8,6%
Future household composition		
Single person	11,6%	19,4%
Couple	69,7%	72,3%
Single parent and child(ren)	0,8%	0,4%
Couple and child(ren)	7,7%	1,5%
Unknown	10,1%	6,5%
Mobility		
Mobile	84,7%	77,1%
Not mobile	15,3%	22,9%
Income		
Less than 1x middle-income	16,8%	18,8%
1-1,5x middle-income	27,1%	31,5%
1,5-2x middle-income	18,1%	18,4%
2x middle-income or more	16,2%	9,7%
Unknown	21,8%	21,6%
n =	790 59,5%	537 40,5%

Table 8.18. The importance ranking of the attributes for people that prefer an owner-occupied one-family house and for people that prefer an owner-occupied multiple-family house.

One-family house		**Multiple-family house**		
Attribute	*Share*	*Attribute*		*Share*
Tenure	19,6%	↑ Price	+1	26,0%
Price	19,1%	↑ Housing type	+2	20,6%
Elderly housing	13,4%	– Elderly housing		15,9%
Housing type	12,0%	↑ Housing surface	+1	11,9%
Housing surface	11,6%	↓ Tenure	-4	10,5%
Contact with neighbours	8,1%	↑ Number of rooms	+4	4,1%
Building heights	6,0%	↓ Contact with neighbours	-1	3,9%
Distance to health facilities	4,5%	– Distance to health facilities		3,7%
Ambiance	3,0%	↓ Building heights	-2	2,2%
Number of rooms	2,7%	↓ Ambiance	-1	1,0%

Looking at the importance of the different vicinity qualities, two things stand out. Living in a neighbourhood consisting of low buildings is much more important for the people that want to move to a low building: the one-family house. However, despite being less important in the housing choice of people that prefer a multiple-family house, people that want to move to a multiple-family house still prefer a neighbourhood with building with a maximum of four storeys. People that want to move to a multiple-family dwelling find the proximity of health facilities much more important.

Table 8.20 shows the willingness to pay coefficients, as introduced in 8.1.5, for the people that want to move to an owner-occupied one-family house and for the people that want to move to an owner-occupied multiple-family house. Although housing type is relatively more important in the housing choice of people that want to move to a multiple-family house, the willingness to pay decreases more for the people that prefer an one-family house if they cannot get their preferred housing type. This is because the relative importance of the price for the people that prefer a multiple-family house is higher as well. Table 8.21 shows the relative willingness to pay for the two groups for all possible combinations of the housing type, housing surface, number of rooms and suitability for elderly people

Table 8.19. The importance ranking of the different vicinity attributes for people that prefer an owner-occupied one-family house and for people that prefer an owner-occupied multiple-family house based on the rating model.

One-family house		**Multiple-family house**		
Attribute	*Share*	*Attribute*		*Share*
Building heights	39,0%	↑ Distance to health facilities	+3	30,1
Contact with neighbours	24,8%	↑ Ambiance	+1	22,7%
Ambiance	24,1%	↓ Contact with neighbours	-1	20,5%
Distance to health facilities	10,7%	↓ Buidling heights	-3	19,3%
Composition of the neighbourhood	1,3%	– Composition of the neighbourhood		7,5%

attribute levels. The combinations that are valued above average are marked green.

The seven most preferred quality combinations of the people that want to move to an owner-occupied dwelling, contain one-family dwellings, the nine most preferred quality combinations of the people that want to move to a multiple-family dwelling, contain apartments. A big difference is that no trade-offs can be found in the former and a lot of trade-offs in the latter.

The people that prefer one-family houses are willing to pay about the same for an one-family house of 70 square meters and three rooms that is suitable for elderly people as they are willing to pay for an apartment of 130 square meters and five rooms that is suitable for elderly people. Both can also be traded for a one-family house of 130 square meters, with four rooms that is not suitable for elderly people. The first two combinations have two different levels compared to the most preferred qualities, the last one only one. Two more above average valued trade-offs can be found in this table.

Because the coefficients of the attribute levels 100 square meters and 130 square meters, and four rooms and five rooms are close together. Way more trade-offs can be found for the people that prefer to move to an owner-occupied multiple-family dwelling. For example the attribute level combination from an apartment of 130 square meters, with three rooms that is suitable for elderly people, up to an apartment of 100 square meters, with five rooms that is suitable for elderly people.

	One-family	Multiple-family
Housing type		
one-family house	0	0
apartment	-0,699	0,608
Housing surface		
70 sqm	0	0
100 sqm	0,327	0,291
130 sqm	0,292	0,046
Number of rooms		
3 rooms	0	0
4 rooms	0,220	0,039
5 rooms	-0,143	-0,059
Elderly housing		
yes	0	0
no	-0,857	-0,649

Table 8.20. Willingness to pay coefficients for people that prefer an owner-occupied one-family house and for people that prefer an owner-occupied multiple-family house.

8.5. Conclusion

The preferences found in the conjoint analysis mostly match those of the traditional survey. The most preferred qualities do not seem to change by age, mobility, household composition or preferred owner-occupied housing type groups (for the groups that are included in this research). An exception is the preference of housing type. The share of people that has preferences for those qualities however does change. So does the importance of the different qualities in their housing choice.

In their housing choice, they more focus on housing qualities than vicinity qualities. This focus seems to increase with age. What the most important housing qualities are, differs per sub group. What stand out is that price is the most important quality in housing choice, followed by the suitability for elderly

housing, for the 55-75 age groups, both mobile and not-mobile people and both couple and single households. For the 75+ group, the suitability for elderly housing is the most important quality, followed by housing type and then the price. Housing type is a quality that gets more important as age increases. For the 55-64 group this was the least important quality. The housing type is also way more important for people that want to move to an owner-occupied multiple-family house compared to people that want to move to an owner-occupied one-family dwelling. The tenure shows the opposite trend. For the 55-64 age group this was the third most important quality and for the people that want to move to an owner-occupied the most important quality. For the oldest group, it is the least important quality and for the people that want to move to an owner-occupied multiple-family dwelling the fifth most important quality.

Table 8.21. The willingness to pay for a combination of the qualities housing type, housing surface, number of rooms and suitability for elderly house per age group for people that prefer an owner-occupied one-family house and for people that prefer an owner-occupied multiple-family house. One-family, 70sqm, 3rooms, no is the base combination.

One-family house		Multiple-family house	
one-family, 130sqm, 4rooms, yes	0,838	apartment, 130sqm, 4rooms, yes	0,984
one-family, 130sqm, 5rooms, yes	0,696	apartment, 130sqm, 3rooms, yes	0,945
one-family, 130sqm, 3rooms, yes	0,618	apartment, 100sqm, 4rooms, yes	0,939
one-family, 100sqm, 4rooms, yes	0,547	apartment, 130sqm, 5rooms, yes	0,925
one-family, 100sqm, 5rooms, yes	0,404	apartment, 100sqm, 3rooms, yes	0,900
one-family, 100sqm, 3rooms, yes	0,327	apartment, 100sqm, 5rooms, yes	0,879
one-family, 70sqm, 4rooms, yes	0,220	apartment, 70sqm, 4rooms, yes	0,647
apartment, 130sqm, 4rooms, yes	0,139	apartment, 70sqm, 3rooms, yes	0,608
one-family, 70sqm, 5rooms, yes	0,077	apartment, 70sqm, 5rooms, yes	0,588
one-family, 70sqm, 3rooms, yes	0,000	one-family, 130sqm, 4rooms, yes	0,376
apartment, 130sqm, 5rooms, yes	-0,003	one-family, 130sqm, 3rooms, yes	0,337
one-family, 130sqm, 4rooms, no	-0,019	apartment, 130sqm, 4rooms, no	0,336
apartment, 130sqm, 3rooms, yes	-0,081	one-family, 100sqm, 4rooms, yes	0,330
apartment, 100sqm, 4rooms, yes	-0,152	one-family, 130sqm, 5rooms, yes	0,317
one-family, 130sqm, 5rooms, no	-0,162	apartment, 130sqm, 3rooms, no	0,297
one-family, 130sqm, 3rooms, no	-0,239	one-family, 100sqm, 3rooms, yes	0,291
apartment, 100sqm, 5rooms, yes	-0,295	apartment, 100sqm, 4rooms, no	0,290
one-family, 100sqm, 4rooms, no	-0,311	apartment, 130sqm, 5rooms, no	0,276
apartment, 100sqm, 3rooms, yes	-0,372	one-family, 100sqm, 5rooms, yes	0,271
one-family, 100sqm, 5rooms, no	-0,453	apartment, 100sqm, 3rooms, no	0,251
apartment, 70sqm, 4rooms, yes	-0,479	apartment, 100sqm, 5rooms, no	0,230
one-family, 100sqm, 3rooms, no	-0,531	one-family, 70sqm, 4rooms, yes	0,039
apartment, 70sqm, 5rooms, yes	-0,622	one-family, 70sqm, 3rooms, yes	0,000
one-family, 70sqm, 4rooms, no	-0,637	apartment, 70sqm, 4rooms, no	-0,002
apartment, 70sqm, 3rooms, yes	-0,699	one-family, 70sqm, 5rooms, yes	-0,020
apartment, 130sqm, 4rooms, no	-0,718	apartment, 70sqm, 3rooms, no	-0,041
one-family, 70sqm, 5rooms, no	-0,780	apartment, 70sqm, 5rooms, no	-0,061
one-family, 70sqm, 3rooms, no	-0,857	one-family, 130sqm, 4rooms, no	-0,273
apartment, 130sqm, 5rooms, no	-0,860	one-family, 130sqm, 3rooms, no	-0,312
apartment, 130sqm, 3rooms, no	-0,938	one-family, 100sqm, 4rooms, no	-0,318
apartment, 100sqm, 4rooms, no	-1,009	one-family, 130sqm, 5rooms, no	-0,332
apartment, 100sqm, 5rooms, no	-1,152	one-family, 100sqm, 3rooms, no	-0,357
apartment, 100sqm, 3rooms, no	-1,230	one-family, 100sqm, 5rooms, no	-0,378
apartment, 70sqm, 4rooms, no	-1,336	one-family, 70sqm, 4rooms, no	-0,610
apartment, 70sqm, 5rooms, no	-1,479	one-family, 70sqm, 3rooms, no	-0,649
apartment, 70sqm, 3rooms, no	-1,556	one-family, 70sqm, 5rooms, no	-0,669

Regarding the vicinity qualities, the 55-64 and 65-74 group, mobile people, couples and people that prefer to move to owner-occupied one-family houses find the low building heights in the neighbourhood the most important quality in their housing choice, followed by the degree of contact with neighbours, whether the neighbourhood is quiet or lively, the distance to health facilities and the age composition of the neighbourhood. For the 75+ group, because of their decreasing health, the distance to health facilities becomes most important. This is also the case for not-mobile people and people that prefer to move to an owner-occupied multiple-family dwelling. For singles, it is almost the most important vicinity quality. Especially for the not-mobile and 75+ people, the importance of living in a neighbourhood with a lot of privacy decreases much.

The willingness to pay for a change in housing qualities is calculated but differs per province and tenure of the dwelling. What stands out is that the suitability for elderly people is of great influence for the willingness to pay of all age groups. The older people get, the bigger the difference between willingness to pay for their most preferred combination of qualities and least preferred combination of qualities. Furthermore, The willingness to pay of the 65-74 age group for the preferred dwelling of the 55-64 group, compared to their own preferred dwelling, is lower than the other way around. This is even way lower for the 75+ group. Therefore, it is really important, especially for the 75+ age group, to construct the housing that exactly fits their qualitative demand.

9. Conclusion & Discussion

9.1. Conclusion

There is a mismatch on the Dutch housing market. A lot of households cannot find a dwelling that fits their resources and qualitative demand. Most of the time this does not mean that their desired house does not exist. It could mean that the houses they are looking for, are occupied by other households. Part of these households face the same problem and cannot find their preferred dwelling as well. The housing flow is stuck. One way to get the flow started again is by people aged 55 years and older, on top of the housing ladder, moving houses. Part of this group is willing to move, but cannot find a suitable dwelling too. Building more of their preferred houses will stimulate that group moving houses and therefore would stimulate the housing flow. The only problem is that developing companies often do not know by which qualitative housing the 55 years and older groups are attracted. The question that therefore needs to be answered is: *What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands?* Five sub-questions have been constructed on the basis of which this can be answered. The first three sub-questions are elaborated using literature and existing data sets. The last two sub-questions are elaborated using a survey consisting of a traditional survey part and a conjoint analysis part. The advantage of the conjoint analysis is that is possible to make statements about preferences, the valuation of not-prefered qualities, the importance of certain qualities, trade-offs and willingness to pay. First, the conclusions of these sub-questions will be elaborated, after which the general conclusion will be stated.

9.1.1. Characteristics of people aged 55 years and older

The first sub question that will be answered based on this research is: *What are the characteristics of people aged 55 years and older on the Dutch housing market?*

To start with, the amount and share of people aged 55 years and older are increasing. Reasons for this are the decreasing fertility and mortality rate. The amount of 55+ households is expected to increase by 24% from 2020 to 2040. The increase is expected to be the most in the west and east part of the Netherlands. The expected increasing share is highest in the north and east part.

Compared to 1980 and 2000, people get children at an older age and children live at their parents' house for a longer time. Therefore more 55+ households have children living at home. This is mostly within the 55-64 age group. Another trend is the increasing percentage of one-person households in the Netherlands. This trend is already visible in the 55-64 age group and will continue in the next years.

The current 55+ group is better educated than former generations. Compared to 2005, the share of highly educated men has increased by 30% and the share of highly educated women even more, 70%. The group is also more wealthy than previous generations. However, their average income is lower than the average income of the working population. This has to do with the fact that a large part of the people aged 55 years and older is already retired. The difference in income with previous generations can partly be declared by the better education, the fact that the retirement age has increased and that they have better pensions. The equity of the current generation is higher as well. Because owner-occupancy is more stimulated during their housing career and the fact that people have had more income than previous generations, this generation consists of more homeowners. After buying their houses, the housing prices have risen dramatically which had a positive effect on their equity.

Of the households aged 55 years and older, 33% lives in a social rental house, 7% in a private rental house and 60% in an owner-occupied house. 69% lives in an one-family house and 31% in a multiple-family house. The older the people are, the more they rent, live in a multiple-family house and live smaller. This is partly because people choose to move from other housing types to houses with these characteristics, but for a great part because they have never lived in a dwelling with other characteristics.

People also live independent until an older age. Because they are healthier for a longer time, because the government stimulates this and because they want to keep living at the place they have already lived at for a long time. The longer they live at the same place, the more they are emotionally attached to their house and vicinity.

It should be taken into account that the great group of people aged 55 years and older can and should be divided into multiple subgroups. These can for example be based on different age groups, compositions of households, mobility and wealth.

9.1.2. Reasons to move

The second question that should be answered is: *What are motivations of people aged 55 years and older in the Netherlands to move?*

Of the people aged 55-64, 70% indicated that they absolutely did not want to move. This percentage had increased to 83% for the 75+ group. The people that were willing to move, were found to be more critical in their search than younger age groups. This is because their urge to move often is not big and therefore they only choose to

move to a dwelling that suits their demand completely. Realising moving houses for people aged 55 years and older therefore takes a longer time compared to younger people.

Three categories of reasons to move are distinguished in this research: life events, unsatisfying housing and vicinity qualities and (other) personal reasons. These categories can overlap.

Life events are trickers for moving houses. These life events can be expected or unexpected. The older people get, the more unexpected movings take place. For people aged 75 years and older, this is two in three times the case. The most common unexpected reason is decreasing health. For 41% of the movings, this is at least one of the reasons. A change in the composition of the household and retirements are other life events. The latter often leads to moving houses over a greater distance.

37% of the people aged 55 years and older wants to move because they are dissatisfied with their current house, 21% because they are dissatisfied with their vicinity. A great deal of the people that are dissatisfied with their house, think it is too big. This share increases by age. 37% of the people aged 55-64 and 49% of the people aged 75 years or older have this opinion. This is related to decreasing health. Housekeeping and walking become too much effort in a big house. As a precaution, not living in a house that is suitable for people with a decreased mobility can be a reason to move as well.

Unsatisfying vicinity qualities are an unsafe feeling in the neighbourhood, a bad relationship with neighbours and absence of amenities. Next to that, people aged 55 years and older often want to move away from extreme environments like big cities or rural areas.

A personal reason to move is that people want to move back to their place of birth. This often happens after retirement, as they do not have commitments at their current hometown anymore. Another reason is moving closer to family and friends, this also often takes place after retirement and can be a precaution for decreasing health as well. Lastly, financial reasons can lead to moving houses. This happens after increasing housing costs or when people want to release equity.

9.1.3. Desired qualities

What are the housing and vicinity preferences of Dutch people aged 55 years and older that are willing to move to a private rental or owner-occupied dwelling? is the question that will be answered as a third.

In general, people are looking for an owner-occupied house. This is especially true for the youngest age group, but also for more than half of the people aged 75 years and older. The owner-occupied demand is higher than in the past because more people have already purchased a house before. Most people hope to find a house in the cheap price class. However, for most of them a price in the middle class is also acceptable.

The most preferred housing type is the multiple-family house, although the 55-64 age group still has a preference for the one-family house. It is not clear whether a majority wants to move to a dwelling that is suitable for elderly people. It is clear though, that this increases with age.

In general, people aged 55 years and older want to move to a smaller house. The desired surface becomes smaller as people get older, the same goes for the desired number of rooms. This is also for a great part dependent on the household composition, which is often reducing as people get older. What stands out is that people want their new living room to have the same or a bigger surface than their current living room.

Important vicinity qualities for people aged 55 years and older are the reachability of amenities. They find a distance to health facilities acceptable until one kilometre walking distance. However, they prefer the facilities within 500 meters from their home. This is especially true for the oldest age group. Reachability of public transport and shops are preferred as well. The older people get, the more they appreciate this. Of the people aged 55-64, 25% definitely wants shops within 500 meters from their house. This percentage has increased to 47% for the 75+ group.

As people aged 55 years and older want to be part of the society, most of them prefer to live between a mix of age groups. A part wants to live with people of the same age to organize health care together. However, they all prefer privacy above contact with neighbours. Next to that, they prefer a neighbourhood that is quiet and consists for the greatest part of buildings with a maximum of four storeys. This last preference weakens as people get older because then they want to live in apartments, which are more present in neighbourhoods with higher buildings. But above all, they want to stay in their current neighbourhood. Of the people aged 75 years and older, 26% states that they do not want to move if they cannot find a new dwelling in their current neighbourhood.

9.1.4. Subgroups

The fourth sub question, *which Dutch 55 years and older subgroups that are willing to move to a private rental or owner-occupied dwelling can be distinguished?*, has a wide range of answer possibilities. Next to a division on age, three other distinctions are considered most interesting for this research. These are based on mobility, future

household composition and desired owner-occupied dwelling.

Mobile people are on average younger and have a higher income than people that are not mobile. Not-mobile people relatively more often want to move to an apartment and a dwelling that is suitable for elderly people. Mobile people have a stronger preference for a neighbourhood with a lot of privacy.

Not a lot of differences in characteristics of future single and couple household can be found, except future single households having a lower average income. Singles are relatively more looking for rental houses, although still more than 80% prefers an owner-occupied dwelling. They have a preference for an apartment, where couples prefer an one-family house, and are looking for smaller dwellings with fewer rooms than couples.

Compared to the group that wants to move to an owner-occupied multiple-family house, the group that wants to move to an owner-occupied one-family house on average is younger, contains more households with partners and/or children, contains more mobile people and has a little more income. The people that want to move to the one-family house, more often are looking for a bigger house with more rooms than the people that want to move to a multiple-family dwelling. They less often desire a dwelling that is suitable for elderly people and find a higher price more acceptable. Furthermore, they find a further distance to health facilities more acceptable and prefer a neighbourhood with privacy, where the other group leans more towards a neighbourhood where they have contact with their neighbours.

9.1.5. Importance of qualities

The last question that needed to be answered before being able to answer the main research question was: *What are the most important housing and vicinity qualities for the different Dutch 55 years and older groups that are willing to move to a private rental or owner-occupied dwelling?*

The housing preferences of the different subgroups mostly were equal. In the importance of the several qualities on the other side, many differences can be found. In total, the importance of ten qualities are compared to each other for every group. Six of those qualities were physical housing qualities, one was a physical vicinity quality, one was a functional vicinity quality and two were social vicinity qualities: tenure, housing type, housing surface, number of rooms, suitability for elderly people, price, building heights, distance to health facilities, contact with neighbours and ambiance, in that order.

The first thing that stands out is that housing qualities seem to be of more importance in the housing choice of people aged 55 years and older than the other qualities. This importance slightly increases by age but has a ratio of about 4:1 (housing qualities: other qualities) for all age groups.

Price is the most important quality for the 55-64 and 65-74 age groups, followed by suitability for elderly people. For the 75+ age group, the suitability for elderly people is the most important quality, followed by housing type and then price. Housing type as the second most important quality is remarkable, as this is fifth-ranked for the 65-74 group and last ranked for the 55-64 group. The tenure on the other side is the least important quality for the 75+ group, while this is the fourth most important quality for the 65-74 group and the third most important quality for the 55-64 group. Housing surface is ranked about equally important to all age groups and the number of rooms becomes a little more important by age, although still only ranked fifth for the oldest group.

Looking at other subgroups, it stands out that people that are not mobile find the surface of their future dwelling relatively less important than mobile people. They value a surface of 100 square meters almost equally well as a surface of 130 square meters, where mobile people have a strong preference for 130 square meters. Singles find it relatively more important to move to their desired housing type, an apartment, than couples, who prefer an one-family house. This trend is seen in all groups that prefer apartments: 65+ people, not-mobile people and people that prefer an owner-occupied multiple-family house. The groups that prefer apartments, in general prefer to purchase their dwelling but find this less important in their housing choice than the groups that prefer to move to one-family houses.

Looking at the importance ranking, the list of most important to least important quality in the housing choice, of just the vicinity qualities, one can conclude that no differences can be found between the 55-64 and 65-74 age groups, the mobile group, the future couples group and the group that wants to move to an owner-occupied one-family dwelling. In this ranking, the age composition of the neighbourhood is also taken into account. The importance order is: building heights, contact with neighbours, ambiance, distance to health facilities and composition of the neighbourhood. For the 75+ group this is completely different. For them, distance to health facilities is the most important, followed by ambiance, building heights, the composition of the neighbourhood and contact with neighbours. Distance to health facilities is also relatively more important for the not-mobile group, the future single group and the group that wants to move to an owner-occupied multiple-family dwelling. The last thing that stands out is mobile people find having a lot of privacy a lot more important in their housing choice than not-

mobile people.

With the data, it is also possible to make some statements about willingness to pay. The housing quality upgrade for which people are willing to pay most is a dwelling that is suitable for elderly people. The older people get, the more they value this. The data shows that as people get older, they are less willing to pay for housing that deviates from their first preference, compared to this preference. Furthermore, The difference in willingness to pay of the 65-74 people for the preferred dwelling of the 55-64 group, compared to their own preferred dwelling, is bigger than the other way around. This difference becomes even bigger when comparing the 55-64 and 75+ group. So people become pickier as they gey older. Therefore it is especially important to build the houses that fit the qualitative housing demand of the older age groups.

9.1.6. The kind of new housing that is needed

After answering all sub-questions, it is possible to answer the main question: *What kind of new housing is needed to best accommodate the different 55 years or older groups in the Netherlands?*

The current generation of people aged 55 years and older differs from previous generations. In general, they are wealthier than their predecessors and have more owner-occupied and bigger houses. This is also reflected in their housing preferences. More people are interested in moving to owner-occupied houses and most people are looking for owner-occupied houses with four rooms, for the youngest group even more rooms can be implemented, and of 130 square meters, although 100 square meters suffices for most groups. For the 55-64 age group and the people that want to move to owner-occupied one-family houses, it is not clear whether 100 square meters is acceptable. Fact is that none of the groups is positive about a housing surface of 70 square meters. So the 55+ age groups need more luxurious houses than their predecessors. However, they are also used to having low living costs, which could mean that their demands are unrealistic.

The age group 55-64 wants one-family housing, although this is not a hard preference. By realizing one-family houses, the suitability for elderly people has to be taken into account. This is really important for all groups that are analysed. This means that at least a kitchen, living room, bathroom and bedroom have to be reachable without walking stairs or adjustments should be possible to realize this. For people aged 65 years and older, mostly apartments have to be realized. All buildings should have wide door openings and sanitary rooms and be free from plinths. The apartments should be reachable without stairs and preferably be in buildings with a maximum of four storeys, as this maximum building height within neighbourhoods is preferred. Most people want to move to a house with a living room that is equally big or bigger than their current living room, as people spend more time at their house as they get older. Therefore it is advised to make sure the living room is and looks spacious.

Looking at the vicinity, people aged 55 years and older, in general, do not want to live in highly urbanized city centres. On the other hand, they also prefer not to live in rural areas without closeby amenities. As people aged 55 years and older often want to keep living in their current neighbourhood, area developments taking place in neighbourhoods that already consist of people aged 55 years and older are needed. If the target groups are people aged 75 years or older, not-mobile people, single households, or people that want to move to owner-occupied multiple-family houses, it is important to include close-by health facilities in the design. However, the housing buildings themselves should be focused on living as most people aged 55 years and older value quietness and their privacy.

9.2. Discussion

The outcomes of this research lead to multiple discussion points, based on strength of survey questions, the importance of vicinity qualities and differences between outcomes.

9.2.1. Strength of survey questions

In the fourth chapter, the importance of contact with neighbours was introduced. In the fifth chapter, it was stated that places to meet are important to people aged 55 years and older. Therefore, the outcome that people prefer a lot of privacy above a lot of contact with neighbours is surprising. Within the conjoint analysis, no groups seem to prefer a lot of contact with neighbours. This may be caused by a false contradiction, as privacy does not have to exclude contact with neighbours at all. Another questionable contradiction is that of a low or a mix of building heights. Although it is a contradiction, it would be stronger if the contradiction would have been between low and high building heights. However, this would most probably not have had affected the preference for neighbourhoods with low building heights.

9.2.2. Importance of vicinity qualities

According to the theory that is introduced in this research, the neighbourhood becomes more important as people get older because more time will be spent around their house. This does not become clear from the results of the conjoint analysis. For all age groups, the four vicinity qualities (of the ten qualities in total) have a share of about 20% in the housing choice. This does not mean that the theory is nullified. The low and constant share of the vicinity in the housing choice can be the consequence of the selected vicinity qualities. The importance that is found is relative to the other qualities. In the conjoint model, two social, one functional and one physical vicinity qualities are asked. If only would be focused physical vicinity qualities, for example the proximity of a highway and greenery, the outcome could have been totally different.

9.2.3. Differences between outcomes

In this research, multiple sources are used to receive data on preferences: literature, WoON (2018), and an own survey consisting of a traditional survey and a conjoint survey part. The outcomes of the different sources sometimes differ. This will shortly be explained.

First, both WoON and the traditional survey asked the respondents about their physical condition. In WoON, respondents were asked whether they or their partner are limited in daily activities. If one of the answers was yes, they were categorized as having a decreased mobility. In the traditional part of the survey that is designed for this research, people were asked to indicate with which of the four (or none of them) daily activities they or their household members had difficulties, if they had difficulties with one of them, they were marked as having a decreased mobility. These two methods have led to really different outcomes. Much more respondents of WoON seem to have a decreased mobility compared to the respondents of the traditional survey. This is especially the case for the 75+ group, for whom 64% of the respondents of WoON have a decreased mobility and only 26% of the respondents of the traditional survey. However, in both sources the mobility decreases by increasing age. This difference is especially surprising as the demand for elderly housing is much higher in the survey of this research compared to WoON (2018).

In WoON, people that are willing to move within two years were asked about their housing preferences. In the traditional survey, to increase the number of respondents, people that are willing to move within five years were asked about their housing preferences. Therefore, in the traditional survey, the share of people with an urgent reason to move would be relatively lower and preferences are different. Next to that, the results of WoON are weighted, which means that the outcomes are representative for the total population. The sample of the traditional survey is not representative. This has led to some difference between outcomes between the survey of this research and WoON and the fact that the results cannot be generalized. However, by researching different subgroups, this does not lead to problematic situations.

The last thing that stands out is that the traditional survey part and conjoint analysis in this study not always correspond. This can be explained by the fact that preferences in the traditional survey are asked as one characteristic on its own. In the conjoint analysis multiple qualities were measured together. Preferences and considerations can change if different qualities are combined. If somebody wants to live small and wants to have a high number of rooms, this may be reconsidered if the desired surface and number of rooms are asked together. Not measuring one detached preference is one of the strengths of using the conjoint analysis because it gives information about the trade-off one makes.

9.3. Limitations

The conjoint method, the sample and the research design were all found to have limitations. The disadvantage of the conjoint method is the limited amount of attributes that can be included. By making use of the hierarchical information integration approach, it has been possible to include eleven attributes. The chosen qualities are qualities that were expected to be important or of which not much information was known. With the received data, it is possible to make statements on the importance of all attributes compared to each other, but in real life much more qualities are of importance. The conjoint analysis therefore gives a global view on the importance of a few qualities but does not go in-depth on all possible variables.

For receiving respondents, a panel company was hired. The survey was sent to their customer base and closed after the desired amount of completes was reached. Not every type of person is equally represented in their base and therefore it was not possible to receive a sample that completely reflects the population. This is confirmed by for example looking at the 75+ age group, which is under-represented. The non-representativeness is one of the explanations for the differences between the outcomes of the WoON and the traditional survey. Next to that, people that have a low urge to move are over-represented, as the people that have a high urge, for example because of an

unexpected decline in health, are on average looking for houses for a shorter period. This is reflected in the share of people that say they are willing to move because of health/ need for care. In WoON, 40,6% of the respondents mentioned this as a reason, in the survey of this research only 25,3%.

A disadvantage of the research design is that preferences are generalized. The research is focused on the whole country, but the Netherlands actually consists of multiple housing markets. In the conjoint analysis, this was taken into account by adjusting the housing prices to the preferred province, although prices can even differ a lot within a province. For other characteristics, every respondent saw the same values. It is plausible that other outcomes were received if the research was focused on one location. However, the advantages of focusing on the whole country are that more possible respondents could be reached and that the outcomes can be nationwide used by BPD.

9.4. Recommendations

9.4.1. Research

The 75+ age group is harder to reach than the younger age groups. The outcome of this group is also less significant than the outcomes of other age groups. Therefore it could be interesting to expand the research on this group, for example by organizing focus groups. As the suitability for elderly people of their future house is most important in their housing choice (according to this research), it would be interesting to find out what according to them is a suitable house.

To complement the research, some topics can be researched more in-depth or can be added. Already discussed are the preferences of moving away from the big city centres and rural areas. Next to that, the most expanding regions are mentioned. However, no statements are made on the current housing supply for people aged 55 years and older in possibly interesting locations. By adding this dimension to the research, more focused advice on the desired quantitative housing demand can be given. Next to that, for BPD it would be interesting to implement the results in their marketing strategy. The strategy could be strengthened if some extra analyses are conducted, in which the repondents are divided within Whize segments. This segmentation is based upon physical and social characteristics of Dutch people. This way, they can promote their supply to more a focused audience.

For academic purposes, an additional research on the desired newly built houses in the social rental market sector and the actual effect of moving people on the housing flow could complement the already (to be) researched topics.

9.4.2. Implementation

In future projects for the 55+ age groups, BPD should make sure that the dwellings are suitable for elderly people or that the dwelling is built flexible and could easily be adjusted to the needs of elderly people. It would be best to focus on the 65+ people. Only looking at age and preferences, two main groups can be distinguished: people aged 55-64 and people aged 65+. Therefore, chances are that people aged 55-64 move to a house, that will not fit their demand anymore ten years later and they want or need to move again. For the 65+ group, not a lot of changes in housing demand will take place as they get older. Next to that, older people are pickier and are less willing to move to the house that is preferred by the youngest age group than the youngest age groups is willing to move to a house that is preferred by the oldest age groups. For the total 55+ group, it therefore is best to focus on building apartments. This became clear by looking at the importance of housing type in their housing choice and their willingness to pay.

The apartments to be built have to be mainly owner-occupied as most people that look for an apartment do prefer this tenure. However, within the sample, also 22,8% of the respondents that wants to move to an apartment prefers a rental dwelling. As there are also people that only want to move to one-family houses, these definitely also have to be built. Combining both housing types in one project could be a good possibility, as neighbourhoods with mostly low building heights are preferred. For the 55+ age group, it is best to not build too many rental one-family houses. There is barely a market for this housing type and tenure combination.

Furthermore, if apartments are built, to proximity of amenities has to be taken into account. As most respondents prefer a quiet neighbourhood and a lot of privacy, the amenities can best not be included in the housing buildings. As a great part of the people aged 55 years and older prefer to stay in their current neighbourhood, it would be interesting to look for opportunities near already existing amenities.

10. Reflection

In this last chapter, the research will be reflected based on three pillars: the process, the results and personal development. The research process consisted of developing the research proposal part and conducting the research part. The reflection focuses on the second part.

10.1. Process

At the beginning of this part, much time is spent on cluster analyses to use as a basis for different target groups in the survey. It was decided to delete these analyses, after discussing with the main TU Delft supervisors. A good decision, as the method was not of added value and would have complicated the remainder of the research. This decision was made during the second meeting of the conducting the research part. The first two meetings were focused on the survey and took place within the first five weeks. After this, the supervisors were eager to answer the questions that were sent by mail, but meetings did not take place for six weeks. It took almost two months before the first update of the report was send. In the meantime, consultation and discussion with the internship supervisor had taken place, but the lack of meetings with the TU supervisors led to doubts on the quality of the work. The feedback on the report though, was critically but mainly positive. After this point in time, it was decided to have weekly meetings, to accelerate the process and motivate production. In these meetings, the supervisors have been well-prepared in detail, honest and helpful. Planning regular meetings in the earlier phase could have improved the progress of the research.

In the ideal situation, the five sub-questions would have been elaborated one by one. This was not possible within the tight schedule. The survey that is used for the fourth research question had to be developed at the start of the research. Before the development of the survey, lots of literature had already been consulted. However, it was not clear yet which parts of the literature would come back in the research. The first three sub-questions therefore had to be written towards the pre-defined direction of the survey. Had it be elaborated one by one, this could have led to some other attributes. A question about the preferred surface of the living room would possibly have been added in that case.

The conjoint method can be used for multiple purposes: measuring preferences, importance, willingness to pay and trade-offs. During the start of the research, it was already clear how to interpret the outcomes of a conjoint analysis. The actual analysis therefore was not expected to give any troubles. However, the theory behind the method and the way to receive the results were not studied in-depth beforehand. This has led to a lack of clarity and slight delays multiple times. Diving deeper into these theories beforehand could have had a positive effect on the overall process.

10.2. Results

The main goal of this research was to find the preference for and the importance of different housing qualities with a conjoint analysis. This goal has been reached and therefore the method is successful. The results are surprising as more people than could have been expected, looking at WoON, find suitability for elderly people important. Next to that, all groups prefer the biggest included housing surface. It was interesting to see the difference in importance for tenure, housing type and proximity of health facilities differ between groups. In which often a relationship between the three could be found.

The results are clear and seem to be right, as the results of the ranking and rating task match most of the time. The results can be used in multiple ways. In general, it can be seen as an advice about where to focus on in newly built housing projects for different 55 years and older household types. This advice can be implemented on multiple levels: on the level of the project manager in the plan of requirements, on the level of the realtor in the marketing strategy and on the level of the municipality in the land use plan. This way, it fits the purpose of the Housings Systems chair in which the housing demand and supply and behavioural theories are of main importance.

10.3. Personal development

It was a deliberated choice to perform the research at an internship company. The main idea behind this is getting to know the real estate sector and the working life in general. The ideal company for this purpose seemed to be BPD, as this is a big company with a broad range of activities. This expectation became reality. During the internship, different offices were visited, interesting meetings and presentations were attended and colleagues shared their experiences.

At the beginning of the internship period, the research proposal had to be adjusted quite a lot, which led to a small delay, but also to a better demarcation and more interesting research. The target group now was adjusted to people aged 55 years and older and the problem statement became more recognizable and therefore more personal. Other positive results of doing an internship are that the results will actually be used and published. The downside of doing an internship is the difference in expectations between the university and the internship company. Being the

connector between the two has not always been easy. Especially because explaining choices and theories is not one of my stronger capabilities. Although this was one of the intended learning goals, I have still a hard time doing this.

In the research proposal, multiple other intended improvements were determined as well: in writing skills, quantitative research skills and taking initiative. Writing skills have improved. Connecting texts have become easier, probably because of learning by doing and reading a lot. Mastering the English language has also improved, although it still takes a lot more time than writing in Dutch. Quantitative research skills have also improved. Partly by reading, but for a great deal by discussing theories with the internship supervisor. Taking initiative was especially hard during meetings and in asking for help. At the beginning of the research, asking for help felt like not being able to work independently. However, during the process, it became clear that asking for (aimed) help only improves the process of independently elaborating the research. Therefore the taking initiative has also improved.

References

ABF research. (2020). Primos prognose [Dataset].

Blijie, B., Gopal, K., Steijvers, R., & Faessen, W. (2015). Wonen in beweging. https://www.woononderzoek.nl/handlers/ballroom.ashx?function=download&id=98&rnd=0.6892737559974194

Blijie, B., Van Hulle, R., Poulus, C., Van Til, R. J., & Gopal, K. (2009a). Het inkleuren van voorkeuren, de woonconsument bekent. https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/rapporten/2010/03/24/het-inkleuren-van-voorkeuren-de-woonconsument-bekent/het-20inkleuren-20van-20woonvoorkeuren.pdf

Blijie, B., Van Hulle, R., Poulus, C., Van Til, R. J., & Gopal, K. (2009b). Het wonen overwogen. https://www.woononderzoek.nl/handlers/ballroom.ashx?function=download&id=20&rnd=0.9975397742233749

Boschman, S. (2008). Verhuiswensen en verhuisgedrag in Nederland Een landsdekkend onderzoek. https://www.pbl.nl/sites/default/files/downloads/verhuiswensen-verhuisgedrag.pdf

Boumeester, H. J. F. M., Coolen, H. C. C. H., Dol, K., Goetgeluk, R. W., Jansen, S. J. T., Marien, G., & Molin, E. J. E. (2008). Module Consumentengedrag WoON 2006. Onderzoeksinstituut OTB.

Broekmans, T. (2019). Krasse knarren wonen preventief in een hofje. Skipr, 12(4), 29–34. https://doi.org/10.1007/s12654-019-0030-6

Centraal Bureau voor de Statistiek. (2018). Financieel risico hypotheekschuld; eigenwoningbezitters, 2006-2015 [Dataset]. https://opendata.cbs.nl/#/CBS/nl/dataset/81702NED/table

Centraal Bureau voor de Statistiek. (2020, November 4). Een analyse van het verhuisgedrag van zestigers. https://www.cbs.nl/nl-nl/longread/statistische-trends/2020/een-analyse-van-het-verhuisgedrag-van-zestigers/resultaten

Centraal Bureau voor de Statistiek. (2020b). Geboorte; kerncijfers [Dataset]. h https://www.cbs.nl/nl-nl/cijfers/detail/37422ned?dl=27E3F

Centraal Bureau voor de Statistiek. (2020c). Kerncijfers geboorte; waarneming en prognose. geboortegeneratie [Dataset]. https://opendata.cbs.nl/#/CBS/nl/dataset/84878NED/table

Centraal Bureau voor de Statistiek. (2020d). Personen in huishoudens naar leeftijd en geslacht, 1 januari [Dataset]. https://opendata.cbs.nl/#/CBS/nl/dataset/37620/table?dl=18A0E

Centraal Bureau voor de Statistiek. (2020e). Huishoudens; samenstelling, grootte, regio, 1 januari [Dataset]. https://opendata.cbs.nl/#/CBS/nl/dataset/71486ned/table

Centraal Bureau voor de Statistiek. (2020f). Huizenprijzen in de meeste gemeenten opnieuw gestegen. https://www.cbs.nl/nl-nl/nieuws/2020/07/huizenprijzen-in-de-meeste-gemeenten-opnieuw-gestegen

Centraal Bureau voor de Statistiek. (2020g). Bevolking; geslacht, leeftijd en burgerlijke staat, 1 januari. https://opendata.cbs.nl/statline/#/CBS/nl/dataset/7461BEV/table?fromstatweb

Centraal Bureau voor de Statistiek. (2021a). Bevolkingsstatistiek [Dataset].

Centraal Bureau voor de Statistiek. (2021b). Bevolking; onderwijsniveau; geslacht; leeftijd en migratieachtergrond [Dataset]. https://opendata.cbs.nl/statline/#/CBS/nl/dataset/82275NED/table?fromstatweb

Centraal Bureau voor de Statistiek. (2021c). Inkomen van personen; inkomensklassen, persoonskenmerken [Dataset]. https://opendata.cbs.nl/statline/#/CBS/nl/dataset/83931NED/table?dl=D4D1

Clark, W. A. V., & Deurloo, M. C. (2006). Aging in place and housing over-consumption. Journal of Housing and the Built Environment, 21(3), 257–270. https://doi.org/10.1007/s10901-006-9048-3

Crutzen, C., & Hagen, G. J. (2020, June 11). Beter benutten van de woningvoorraad. ROmagazine. http://romagazine.nl/beter-benutten-van-de-woningvoorraad/23704 De Groot, C., Manting, D., &

De Groot, C., Manting, D., & Mulder, C. H. (2012). Longitudinal analysis of the formation and realisation of preferences to move into homeownership in the Netherlands. Journal of Housing and the Built Environment, 28(3), 469–488. https://doi.org/10.1007/s10901-012-9320-7

De Groot, C. Van Dam, F. & Daalhuizen, F. (2013). Vergrijzing en woningmarkt. https://www.pbl.nl/sites/default/files/downloads/PBL_2013_Vergrijzing_en_woningmarkt_1105.pdf

De Jong, A., & Daalhuizen, F. (2014). De Nederlandse bevolking in beeld. https://www.pbl.nl/sites/default/files/downloads/PBL_2014_De_Nederlandse-bevolking-in-beeld_1174.pdf

De Jong, A., & Van Duin, C. (2010). Regionale prognose 2009–2040: Vergrijzing en omslag van groei naar krimp. https://www.pbl.nl/sites/default/files/downloads/regionale_prognose_2009-2040.pdf

De Jong, G. F., Wilmoth, J. M., Angel, J. L., & Cornwell, G. T. (1995). Motives and the Geographic Mobility of very Old Americans. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 50B(6), S395–S404. https://doi.org/10.1093/geronb/50b.6.s395

De Jong, P., Rouwendal, J., Van Hattum, P., & Brouwer, A. (2012). Housing Preferences of an Ageing Population. https://www.netspar.nl/assets/uploads/024_De_Jong.pdf

De Vries, P., & Boelhouwer, P. J. (2006). Woningkwaliteit, woningprijs en conjunctuur. https://nethur.nl/download/Nummer38versie3.pdf

Dillingh, R., Prast, H., Rossi, M., & Urzì Brancati, C. (2017). Who wants to have their home and eat it too? Interest in reverse mortgages in the Netherlands. Journal of Housing Economics, 38, 25–37. https://doi.org/10.1016/j.jhe.2017.09.002

Doekhie, K. D., De Veer, A. J. E., Rademakers, J. J. D. J. M., Schellevis, F. G., & Francke, A. L. (2014). Ouderen van de toekomst. https://www.aco-utrecht.nl/wp-content/uploads/A.3-23NIVEL-Ouderen-van-de-toekomst.-Verschillen-in-de-wensen-en-mogelijkheden-voor-wonen-welzijn-en-zorg.pdf

Ekamper, P. (2020). Vijftig jaar demografische verandering. Demos: bulletin over bevolking en samenleving, 36(10), 1-4.

Figueroa Martínez, C., Hodgson, F., Mullen, C., & Timms, P. (2019). Walking through deprived neighbourhoods: Meanings and constructions behind the attributes of the built environment. Travel Behaviour and Society, 16, 171–181. https://doi.org/10.1016/j.tbs.2019.05.006

Garretsen, H., & Marlet, G. (2016). Amenities and the attraction of Dutch cities. Regional Studies, 51(5), 724–736. https://doi.org/10.1080/00343404.2015.1135239

Golant, S. M. (2011). The quest for residential normalcy by older adults: Relocation but one pathway. Journal of Aging Studies, 25(3), 193–205. https://doi.org/10.1016/j.jaging.2011.03.003

Hansen, E. B., & Gottschalk, G. (2006). What Makes Older People Consider Moving House and What Makes Them Move? Housing, Theory and Society, 23(1), 34–54. https://doi.org/10.1080/14036090600587521

Hillcoat-Nallétamby, S., & Ogg, J. (2013). Moving beyond 'ageing in place': older people's dislikes about their home and neighbourhood environments as a motive for wishing to move. Ageing and Society, 34(10), 1771–1796. https://doi.org/10.1017/s0144686x13000482

Hoekstra, J., Elsinga, M., Haffner, M., & Dol, K. (2018). Integrating Residential Property with Private Pensions in the EU: Annex to final report 2017. IFF Hamburg.

Medical Delta. (2013). Grijs is niet zwart wit. https://www.leydenacademy.nl/wp-content/uploads/2013/05/Grijs-is-niet-zwart-wit-Ambities-van-55plus.pdf

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2019). Ruimte voor wonen. https://www.woononderzoek.nl/document/Ruimte-voor-wonen--de-resultaten-van-het-WoON2018-(interactief)-/174

Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer. (2010). Senioren op de woningmarkt. https://www.rigo.nl/wp-content/uploads/2010/04/Senioren-op-de-woningmarkt-achtergrondrapportage.pdf

Molin, E. J. E. (2011). Conjoint analysis. In The Measurement and Analysis of Housing Preference and Choice (pp. 253–265). Springer Publishing.

Nijkamp, J. E., & Bosker, A. H. (2020). Enabling Older People to Live Independently: A Shared Responsibility of Citizens and Municipality. The European Facility Management International Conference 2020. https://research.hanze.nl/ws/portalfiles/portal/34724340/Companion_Proceedings_version_27082020.pdf#page=85

Orme, B. K. (2010). Getting Started with Conjoint Analysis. Macmillan Publishers.

Planbureau voor de Leefomgeving (2019). Regionale bevolkings- en huishoudensprognose. https://themasites.pbl.nl/o/regionale-bevolkingsprognose/

Pope, N. D., & Kang, B. (2010). Residential Relocation in Later Life: A Comparison of Proactive and Reactive Moves. Journal of Housing for the Elderly, 24, 193–207. https://doi.org/10.1080/02763891003757122

Raad Volksgezondheid & Samenleving. (2020). De derde levensfase: het geschenk van de eeuw. https://www.rijksoverheid.nl/documenten/rapporten/2020/01/31/de-derde-levensfase-het-geschenk-van-de-eeuw

Raad voor de leefomgeving en infrastructuur. (2020). Toegang tot de stad. https://www.rli.nl/sites/default/files/toegang_tot_de_stad_website_def.pdf

Rijksoverheid. (2018). National woonagenda 2018-2021. https://www.rijksoverheid.nl/documenten/publicaties/2018/05/23/nationale-woonagenda-2018-2021

Rijksoverheid. (2020). Oud en zelfstandig in 2030. Aangepast REISadvies. https://www.rijksoverheid.nl/documenten/rapporten/2020/06/30/oud-en-zelfstandig-in-2030-aangepast-reisadvies

Roy, N., Dubé, R., Després, C., Freitas, A., & Légaré, F. (2018). Choosing between staying at home or moving: A systematic review of factors influencing housing decisions among frail older adults. PLOS ONE, 13(1), e0189266. https://doi.org/10.1371/journal.pone.0189266

Scharlach, A., Graham, C., & Lehning, A. (2011). The “Village” Model: A Consumer-Driven Approach for Aging in Place. The Gerontologist, 52(3), 418–427. https://doi.org/10.1093/geront/gnr083

Sixsmith, A., & Sixsmith, J. (2008). Ageing in Place in the United Kingdom. Ageing International, 32(3), 219–235. https://doi.org/10.1007/s12126-008-9019-y

Smetcoren, A. S., De Donder, L., Dury, S., De Witte, N., Kardol, T., & Verté, D. (2015). Refining the push and pull framework: identifying inequalities in residential relocation among older adults. Ageing and Society, 37(1), 90–112. https://doi.org/10.1017/s0144686x15001026

Sociaal-Economische Raad. (2010). Naar een integrale hervorming van de woningmarkt. http://www.fairhuurvoorverhuurders.nl/files/literatuur/naar-een-integrale-hervorming-van-de-woningmarkt-april-2010.pdf

Sprinco. (2018). Samenvatting rapportage De Grote Omgevingstest in de provincie Zuid Holland. https://www.spring-co.nl/wp-content/uploads/2018/12/Samenvatting-rapportage-De-Grote-Omgevingstest-2018-1.pdf 24

Stuart-Fox, M., Blijie, B., Gopal, K., R, S., & van Zoelen, S. (2021). Monitor Ouderenhuisvesting 2020. https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/rapporten/2021/01/01/monitor-ouderenhuisvesting-2020/monitor-ouderenhuisvesting-2020.pdf

Timmermans, H., Molin, E. J. E., & Van Noortwijk, L. (1994). Housing choice processes: Stated versus revealed modelling approaches. Netherlands Journal of Housing and the Built Environment, 9(3), 215–227. https://doi.org/10.1007/bf02496997

Tu, Q., de Haan, J., & Boelhouwer, P. J. (2017). House prices and long-term equilibrium in the regulated market of the Netherlands. Housing Studies, 33(3), 408–432. https://doi.org/10.1080/02673037.2017.1346786

Van Dam, F., Daalhuizen, F., De Groot, C., Van Middelkoop, M., & Peeters, P. (2013). Vergrijzing en ruimte. https://www.pbl.nl/publicaties/vergrijzing-en-ruimte

Van der Heijden, H., & Boelhouwer, P. J. (2018). Wat is er aan de hand met de woningmarkt? Vastgoedrecht (Zutphen), 2018(6), 125-131.

Van der Heijden, H., Dol, K., & Oxley, M. (2011). Western European housing systmes and the impact of the international financial crisis. Journal of Housing and the Built Environment, 26, 295-313. doi:10.1007/s10901-011-9230-0

Van Iersel, J., Leidelmeijer, K., & Buys, A. (2009). Senioren op de woningmarkt. https://www.rigo.nl/wp-content/uploads/2010/04/Senioren-op-de-woningmarkt-achtergrondrapportage.pdf

Van der Meer, M. J. (2006). Older adults and their sociospatial integration in The Netherlands. https://dare.uva.nl/search?identifier=8120e1e6-b77e-468a-80a1-20b034197894

Van Duin, C., Stoeldraijer, L., Van Roon, D., Harmsen, C. (2016). Huishoudensprognose 2015-2060: jongeren en ouderen langer thuis. https://marlouvanbatenburg.files.wordpress.com/2018/01/2016-huishoudenprognose-2015-2060.pdf

Van Iersel, J., Leidelmeijer, K., & Buys, A. (2009). Senioren op de woningmarkt. https://www.rigo.nl/wp-content/uploads/2010/04/Senioren-op-de-woningmarkt-achtergrondrapportage.pdf

Van Middelkoop, M., & Boumeester, H. J. F. M. (2014). Modelling housing preferences using decision tables: method and empirical illustration (PBL Working paper 16). https://www.pbl.nl/sites/default/files/downloads/PBL2014_Modelling-housing-preferences-using-decision-tables.pdf

Van Rosmalen, B. (1994). Succes- en faalfactoren bij de ontwikkeling van woningbouwprojecten. Delft University Press.

Vanleerberghe, P., De Witte, N., Claes, C., Schalock, R. L., & Verté, D. (2017). The quality of life of older people aging in place: a literature review. Quality of Life Research, 26(11), 2899–2907. https://doi.org/10.1007/s11136-017-1651-0

Visser, P., & van Dam, F. (2006). De prijs van de plek. NAi Uitgevers.

VROM-raad. (2009). Wonen in ruimte en tijd (Advies 072). https://www.rli.nl/sites/default/files/woneninruimteentijd6-2009advies.pdf

Wilkinson, M. D., Dumontier, M., Aalbersberg, I. J., Appleton, G., Axton, M., Baak, A., Blomberg, N., Boiten, J., da Silva Santos, L. B., Bourne, P. E., Bouwman, J., Brookes, A. J., Clark, T., Crosas, M., Dillo, I., Dumon, O., Edmunds, S., Evelo, C. T., Finkers, R., … Mons, B. (2016). The FAIR Guiding Principles for scientific data management and stewardship. Scientific Data, 3(1), 1–9. https://doi.org/10.1038/sdata.2016.18 25

Wiseman, R. F. (1980). Why Older People Move. Research on Aging, 2(2), 141–154. https://doi.org/10.1177/016402758022003

WoON. (2012). WoonOnderzoek Nederland 2012 [Dataset].

WoON. (2018). WoonOnderzoek Nederland 2018 [Dataset].

Zeelenberg, S., & Smeulders, E,. (2013). Verlengde verhuisketens. https://www.platform31.nl/uploads/attachment_file/62/Publicatie_Verlengde_verhuisketens.pdf

Zeelenberg, S., & Van Kessel, E. (2014). Senioren in beweging. https://www.platform31.nl/publicaties/senioren-in-beweging

Appendices

Appendix A:
Privacy policy Panelclix

Ons programma kan bestaan dankzij jouw vrijwillige deelname aan PanelClix. Voor ons is het dan ook van essentieel belang dat al jouw persoonlijke gegevens zijn beschermd. Minstens zo belangrijk vinden we het om je duidelijk te informeren over hoe we jouw gegevens beschermen en hoe we deze gebruiken voor een zo prettig mogelijke gebruikerservaring.

Beveiliging boven alles
De infrastructuur en software van ons spaarprogramma zijn zo gemaakt en beveiligd dat onbevoegden geen toegang hebben tot jouw persoonlijke gegevens. Heb je vragen of twijfels over de beveiliging die we toepassen, aarzel dan niet om onze ledenservice te benaderen via panelclix@euroclix.nl.

Ons privacybeleid voldoet aan de Algemene Verordering Gegevensbescherming (“AVG”). Bovendien zijn we met het EuroClix/PanelClix spaarprogramma aangemeld bij het College Bescherming Persoonsgegevens onder meldingsnummer 1414870. Ook houden we ons aan de Code Reclame via E-mail zoals deze is opgesteld door de brancheverenigingen DDMA en hanteert PanelClix een beleid dat is gebaseerd op de gedragscode van Esomar, de Europese overkoepelende organisatie van marktonderzoekbureaus.

Wat verstaan we onder jouw gegevens?
Onder jouw gegevens verstaan we:
- de gegevens en profielkenmerken die je zelf bij ons hebt ingevuld en
- gegevens die wij over jou verzamelen, zoals:

- surf, klik en koopgedrag op onze website en in onze e-mails
- cookies
- IP-adres

Wat doen we niet met je gegevens?
We beloven je dat we jouw persoonlijke gegevens nooit zullen verkopen aan of ruilen met welke partij dan ook. Ook delen we jouw gegevens nooit met derden, tenzij je daar expliciet toestemming voor hebt gegeven.

Het complete privacybeleid is te vinden op https://www.panelclix.com/nl/privacy.html

Appendix B:
Survey questions

Deze enquête is bedoeld om meer te weten te komen over uw woonwensen.

*** SELECTIEVRAGEN ***

Vraag 1.

Wat is uw leeftijd?

|invulveld| → indien < 55, einde enquête

Vraag 2.

Wilt u binnen vijf jaar verhuizen?

[1. Beslist niet] → einde enquête

[2. Eventueel wel, misschien]

[3. Zou wel willen, kan niks vinden]

[4. Beslist wel]

[5. Ik heb al een andere huisvesting/woning gevonden] → einde enquête

Vraag 3.

Zoekt u een zelfstandige of onzelfstandige woning?

Een onzelfstandig woning is bijvoorbeeld een woning in een zorgcentrum of –complex.

[1. Een zelfstandige woning]

[2. Een onzelfstandige woning] → einde enquête

[3. Dat weet ik nog niet]

Vraag 4.

Naar wat voor een woning zou u het liefst willen verhuizen?

[1. Een huurwoning]

[2. Een koopwoning]

Als v4= 1. Vraag 5

Naar wat voor een soort huurwoning zou u willen verhuizen?

[1. Een sociale huurwoning] → einde enquête

[2. Een huurwoning in de vrije sector]

Indien einde enquête:

Uit uw gegeven antwoorden blijkt dat u niet tot de doelgroep van deze enquête behoort. Daarom zullen geen verdere vragen gesteld worden. Bedankt voor het invullen van deze enquête.

VRAGENLIJST

Vraag 6.

Wat zijn de belangrijkste redenen dat u binnen vijf jaar wilt verhuizen?

- of: Wat zijn de belangrijkste redenen dat u overweegt binnen vijf jaar te verhuizen?

Kies maximaal drie antwoorden.

{1. Gezondheid of behoefte aan zorg}
{2. Verandering in huishoudenssamenstelling}
{3. Werk}
{4. Om goedkoper te kunnen wonen}
{5. Om geld vrij te spelen uit overwaarde koopwoning}
{6. Huidige woning voldoet niet meer aan uw wensen/eisen}
{7. De woonomgeving of woonbuurt van uw huidige woning voldoet niet meer aan uw wensen/eisen}
{8. Omdat u dichter bij familie, vrienden of kennissen wil wonen}
{9. Andere reden, namelijk |invulveld|}

Vraag 7.

In welke provincie zou u het liefst willen wonen? → Prijzen hierop baseren, zie tabellen onderaan document

[1. Groningen]
[2. Friesland]
[3. Drenthe]
[4. Overijssel]
[5. Gelderland]
[6. Utrecht]
[7. Flevoland]
[8. Noord-Holland]
[9. Zuid-Holland]
[10. Zeeland]
[11. Noord-Brabant]
[12. Limburg]

In de volgende vragen wordt uw voorkeur met betrekking tot woning- en woonomgevingskenmerken gevraagd.

Eerst krijgt u enkele vragen over de gewenste woningkenmerken.

Vraag 8.

In welk type woning zou u het liefst willen wonen?

[1. Flat, appartement, etagewoning, boven- of benedenwoning]
[2. Rijtjeshuis, tussenwoning of hoekwoning]
[3. Twee-onder-één-kap woning]
[4. Vrijstaande woning]
[5. Wooneenheid met gezamenlijk gebruik van keuken of toilet]
[6. Een ander type, namelijk |invulveld|]

Vraag 9.

Welke woonoppervlakte zou u willen hebben?

[1. Kleiner dan 80 vierkante meter]

[2. 80 tot 120 vierkante meter]

[3. Groter dan 120 vierkante meter]

[4. Weet ik niet]

Vraag 10.

Welk aantal kamers zou u willen hebben?

Dit is het totaal aan woon- slaap- studeer- en werkkamers.

[1. Minder dan 4 kamers]

[2. 4 kamers]

[3. 5 kamers of meer]

[4. Weet ik niet]

Vraag 11.

Wenst u een woning geschikt voor de oude dag?

Een woning die geschikt is voor de oude dag is makkelijk te gebruiken door mensen die minder mobiel zijn. Deze woning heeft vaak brede deuropeningen, aangepaste sanitaire ruimtes en minder obstakels, zoals drempels.

[1. Ja. Ik wil een woning geschikt voor de oude dag]

[2. Nee. Ik wil (nog) geen woning geschikt voor de oude dag]

[3. Het maakt mij niet uit]

Indien v4= 2 en V7= 6, 8 of 9 Vraag 12a.

Welke koopprijs vindt u redelijk en heeft u over voor de woning met de door u gewenste kenmerken?

[1. Minder dan €350.000]

[2. €350.000-650.000]

[3. €650.000 of meer]

[4. Weet ik niet]

Indien v4= 2 en V7= niet 6, 8 of 9 Vraag 12b.

Welke koopprijs vindt u redelijk en heeft u over voor de woning met de door u gewenste kenmerken?

[1. Minder dan €275.000]

[2. €275.000-425.000]

[3. €425.000 of meer]

[4. Weet ik niet]

Indien v4=1 en V7= 6, 9 of 11 Vraag 12c.

Welke kale huurprijs vindt u redelijk en heeft u over voor de woning met de door u gewenste kenmerken?

De kale huurprijs is de prijs zonder servicekosten en niet gecorrigeerd voor huurtoeslag.

[1. Minder dan €850 per maand]

[2. €850-1100 per maand]
[3. €1100 of meer per maand]
[4. Weet ik niet]

Indien v4=1 en V7= 8 Vraag 12d.
Welke kale huurprijs vindt u redelijk en heeft u over voor de woning met de door u gewenste kenmerken?
De kale huurprijs is de prijs zonder servicekosten en niet gecorrigeerd voor huurtoeslag.
[1. Minder dan €875 per maand]
[2. €875-1275 per maand]
[3. €1275 of meer per maand]
[4. Weet ik niet]

Indien v4=1 en V7= niet 6, 8, 9 of 11 Vraag 12e.
Welke kale huurprijs vindt u redelijk en heeft u over voor de woning met de door u gewenste kenmerken?
De kale huurprijs is de prijs zonder servicekosten en niet gecorrigeerd voor huurtoeslag.
[1. Minder dan €800 per maand]
[2. €800-950 per maand]
[3. €950 of meer per maand]
[4. Weet ik niet]

Nu krijgt u enkele vragen over de gewenste woonomgevingskenmerken.

Vraag 13.
In wat voor soort woonplaats zou u willen wonen?
Een dorp is een woonplaats met maximaal 20.000 inwoners. Een kleine stad is een woonplaats met 20.000 tot 100.000 inwoners. Een middelgrote/grote stad is een woonplaats met meer dan 100.000 inwoners.
[1. Een dorp]
[2. Een kleine stad]
[3. Een middelgrote of grote stad]
[4. Weet ik niet]

Vraag 14.
Welke afstand van uw woning tot voorzieningen zoals een huisartsenpraktijk, apotheek of fysiotherapiepraktijk zou u acceptabel vinden?
[1. Minder dan 500 meter]
[2. 500 meter tot 1 kilometer]
[3. Meer dan 1 kilometer]
[4. Weet ik niet]

Vraag 15.

In wat voor een soort buurt zou u willen wonen?

Een rustige buurt is een buurt met weinig mensen op straat en weinig activiteit. Een levendige buurt is een buurt met veel mensen op straat en veel activiteit.

Een rustige buurt [0 0 0 0] Een levendige buurt

0 weet ik niet / geen mening

Vraag 16.

Welke gebouwhoogtes zou u in uw buurt willen?

Een buurt met voornamelijk laagbouw is een buurt bestaande uit eengezinswoningen en appartementsgebouwen met maximaal vier verdiepingen.

Een buurt met een mix van bouwhoogtes is een buurt bestaande uit zowel eengezinswoningen en lage (maximaal vier verdiepingen) appartementsgebouwen als hoge (meer dan vier verdiepingen) appartementsgebouwen.

Voornamelijk laagbouw [0 0 0 0] Een mix van bouwhoogtes

0 weet ik niet / geen mening

Vraag 17.

Welke buurtsamenstelling heeft uw voorkeur?

Een buurt bestaande uit veel bewoners behorende tot uw leeftijdsklasse [0 0 0 0] Een buurt bestaande uit bewoners van diverse leeftijdsklassen

0 weet ik niet / geen mening

Vraag 18.

Welke buurtsamenstelling heeft uw voorkeur?

Een buurt waarin veel privacy is [0 0 0 0] Een buurt waarin veel contact met buren is

0 weet ik niet / geen mening

De volgende vragen gaan in op uw huishoudenssamenstelling na uw gewenste verhuizing.

Vraag 19.

Woont u na uw gewenste verhuizing samen met een partner?

[1. Ja]

[2. Nee]

[3. Weet ik niet]

Vraag 20.

Heeft u na uw gewenste verhuizing thuiswonende kinderen?

[1. Ja]

[2. Nee]

[3. Weet ik niet]

We zouden nu graag wat achtergrondinformatie over uw huishouden en uw huidige woonsituatie willen bevragen.

Vraag 21.
In wat voor type woning woont u nu?
[1. Flat, appartement, etagewoning, boven- of benedenwoning]
[2. Rijtjeshuis, tussenwoning of hoekwoning]
[3. Twee-onder-één-kap woning]
[4. Vrijstaande woning]
[5. Wooneenheid met gezamenlijk gebruik van keuken of toilet]
[6. Een ander type, namelijk |invulveld|]

Vraag 22.
Wat is de eigendomsvorm van uw huidige woning?
[1. Een huurwoning]
[2. Een koopwoning]

Indien v22=1 Vraag 23.
In wat voor een huurwoning woont u nu?
[1. Een sociale huurwoning]
[2. Een vrije sector huurwoning]

Vraag 24.
Hoe groot is uw huidige woning?
[1. Kleiner dan 80 vierkante meter]
[2. 80 tot 120 vierkante meter]
[3. Groter dan 120 vierkante meter]
[4. Weet ik niet]

Vraag 25.
Hoeveel kamers heeft uw huidige woning?
Dit is het totaal aan woon- slaap- studeer- en werkkamers.
[1. Minder dan 4 kamers]
[2. 4 kamers]
[3. 5 of meer kamers]

Vraag 26.
Is uw woning geschikt voor de oude dag?
Een woning die geschikt is voor de oude dag is makkelijk te gebruiken door mensen die minder mobiel zijn. Deze woning heeft vaak brede deuropeningen, aangepaste sanitaire ruimtes en minder obstakels, zoals drempels.
[1. Ja, mijn huidige woning is geschikt voor de oude dag]
[2. Nee, mijn huidige woning is niet geschikt voor de oude dag]
[3. Weet ik niet]

Vraag 27.
Wat zijn de vier cijfers van uw huidige postcode?
Dit gebruiken wij om de kenmerken van uw wijk te bepalen. Op basis van de vier cijfers van de postcode is het niet mogelijk om uw adres te achterhalen. Wanneer u uw postcode niet wilt delen kunt u 0000 invullen.
|invulveld|

Vraag 28.
Woont u samen met een partner?
[1. Ja]
[2. Nee]

Vraag 29.
Heeft u thuiswonende kinderen?
[1. Ja]
[2. Nee]

Vraag 30.
Als v28= 1 Wat is het bruto inkomen van uw huishouden per jaar?
Als v28= 2 Wat is uw bruto inkomen per jaar?
[1. Minder dan €36.000]
[2. €36.000-€54.000]
[3. €54.000-€72.000]
[4. Meer dan €72.000]
[5. Wil ik niet zeggen]

Mobiliteit en gezondheid hebben invloed op individuele woonwensen. Daarom zal de volgende vraag ingaan op de mobiliteit van uw huishouden.

Vraag 31.
Als v19= 1 en v20= 1 Welke van de volgende stellingen zijn van toepassing op u, uw partner of uw thuiswonende kind(eren)?
Als v19= 1 en v20= 2 of 3 Welke van de volgende stellingen zijn van toepassing op u of uw partner?
Als v19= 2 of 3 en v20= 1 Welke van de volgende stellingen zijn van toepassing op u of uw thuiswonende kind(eren)?
Als v19= 2 of 3 en v20= 2 of 3 Welke van de volgende stellingen zijn van toepassing op u?
Meerdere antwoorden zijn mogelijk.
{1. Traplopen kost moeite of is niet mogelijk zonder hulp(middelen)}
{2. Zitten en opstaan kost moeite of is niet mogelijk zonder hulp(middelen)}
{3. Tien minuten achter elkaar lopen kost moeite of is niet mogelijk zonder hulp(middelen)]
{4. Bij dagelijkse bezigheden wordt gebruik gemaakt van hulpmiddelen zoals bijvoorbeeld een rollator of scootmobiel}
{5. Geen van bovenstaande stellingen} (Niet mogelijk in combinatie met andere antwoorden)

Het is mogelijk dat de door u gewenste woning niet beschikbaar is. We zijn benieuwd welke andere combinaties van woning- en woonomgevingskenmerken voor u dan acceptabel zijn. In het vervolg van deze enquête krijgt u steeds eerst een aantal woningkenmerken en daarna een aantal woonomgevingskenmerken van twee woningen te zien. Per woning wordt u eerst gevraagd om met een rapportcijfer aan te geven in hoeverre u de gegeven combinatie van woningkenmerken waardeert (1= helemaal niet, 10 = helemaal wel), daarna in hoeverre u de combinatie van woonomgevingskenmerken waardeert en vervolgens wordt gevraagd naar welke van de twee woningen u zou verhuizen, als u alleen deze twee opties zou hebben.

Vraag 32 t/m 36 (De getoonde profielen worden willekeurig gekozen vanuit de vastgestelde profielen.

Scherm 1

In hoeverre waardeert u de combinatie van woningkenmerken van de verschillende twee woningen? *(1= helemaal niet, 10 = helemaal wel)*

	Woning 1	Woning 2
Woningtype (?)	Eengezinswoning	Eengezinswoning
Eigendomsvorm	Koop	Huur
Prijs	Klasse 1	Klasse 1
Woonoppervlakte (?)	130 vierkante meter	100 vierkante meter
Aantal kamers (?)	4	5
Geschikt voor de oude dag (?)	Wel	Wel
Cijfer	[keuze 1 t/m 10]	[keuze 1 t/m 10]

Scherm 2

In hoeverre waardeert u de combinatie van woonomgevingskenmerken van de verschillende twee woningen? *(1= helemaal niet, 10 = helemaal wel)*

	Woning 1	Woning 2
Afstand tot huisartsenpraktijk, apotheek of fysiotherapie (?)	1000 meter of meer	500 tot 1000 meter
Gebouwhoogtes in de buurt (?)	Voornamelijk laagbouw	Voornamelijk laagbouw
Leeftijdsklasse van buurtbewoners	Gelijk aan die van u	Gelijk aan die van u
Sfeer in de buurt (?)	Levendig	Rustig
Verhouding tot buurtbewoners	Veel privacy	Veel privacy
Cijfer	[keuze 1 t/m 10]	[keuze 1 t/m 10]

Scherm 3

Naar welke van de twee woningen u zou verhuizen, als u alleen deze twee opties zou hebben?

	Woning 1	Woning 2
Woningtype (?)	Eengezinswoning	Eengezinswoning
Eigendomsvorm	Koop	Huur
Prijs	Klasse 1	Klasse 1
Woonoppervlakte (?)	130 vierkante meter	100 vierkante meter
Aantal kamers (?)	4	5
Geschikt voor de oude dag (?)	Wel	Wel
Afstand tot huisartsenpraktijk, apotheek of fysiotherapie (?)	1000 meter of meer	500 tot 1000 meter
Gebouwhoogtes in de buurt (?)	Voornamelijk laagbouw	Voornamelijk laagbouw
Leeftijdsklasse van buurtbewoners	Gelijk aan die van u	Gelijk aan die van u
Sfeer in de buurt (?)	Levendig	Rustig
Verhouding tot buurtbewoners	Veel privacy	Veel privacy

Voorkeur	[1. Keuze 1]	[2. Keuze 2]

Pop-upschermen bij muisveeg over (?):

- Woningtype:

Voorbeelden van eengezinswoningen zijn een rijtjeshuis, tussenwoning, hoekwoning, twee-onder-één-kap woning en een vrijstaande woning.

Voorbeelden van appartementen zijn een flat, etagewoning en boven- of benedenwoning

- Woonoppervlakte:

De oppervlakte van alle vloeren bij elkaar.

- Aantal kamers:

Het totaal aan woon- slaap- studeer- en werkkamers.

- Geschikt voor de oude dag:

Een woning die geschikt is voor de oude dag is makkelijk te gebruiken door mensen die minder mobiel zijn. Deze woning heeft vaak brede deuropeningen, aangepaste sanitaire ruimtes en minder obstakels, zoals drempels.

- Afstand tot huisartsenpraktijk, apotheek of fysiotherapie

De afstand over de weg naar zorgvoorzieningen als een huisartsenpraktijk, apotheek of fysiotherapie.

- Gebouwhoogtes in de buurt:

Een buurt met voornamelijk laagbouw is een buurt bestaande uit eengezinswoningen en appartementsgebouwen met maximaal vier verdiepingen.

Een buurt met een mix van bouwhoogtes is een buurt bestaande uit zowel eengezinswoningen en lage (maximaal vier verdiepingen) appartementsgebouwen als hoge (meer dan vier verdiepingen) appartementsgebouwen.

- Sfeer in de buurt

Een rustige buurt is een buurt met weinig mensen op straat en weinig activiteiten.
Een levendige buurt is een buurt met veel mensen op straat en veel activiteiten.

Willekeurig te kiezen profielen bij vraag 32 t/m 36.

	WONING							WOONOMGEVING				
Card ID	Type_woning	HuurKoop	Prijs*	Oppervlak	Aantal_Kamers	Oude_dag		Bereikbaarheid_zorg	Bouwhoogtes	Samenstelling_buurt	Sfeer	Ontmoeting
1	eengezinswoning	Koop	Klasse 1	130 vierkante meter	4	wel		1000 meter of meer	voormamelijk laagbouw	Gelijk aan die van u	levendig	veel privacy
2	eengezinswoning	huur	Klasse 1	100 vierkante meter	5	wel		500 tot 1000 meter	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel privacy
3	appartement	Koop	Klasse 2	70 vierkante meter	4	niet		500 tot 1000 meter	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel privacy
4	appartement	huur	klasse 3	130 vierkante meter	3	wel		500 tot 1000 meter	Mix van bouwhoogtes	Mix van leeftijdsklassen	rustig	veel privacy
5	eengezinswoning	Koop	klasse 3	100 vierkante meter	4	wel		minder dan 500 meter	Mix van bouwhoogtes	Gelijk aan die van u	rustig	veel contact met buren
6	eengezinswoning	Koop	klasse 3	100 vierkante meter	4	wel		minder dan 500 meter	voormamelijk laagbouw	Mix van leeftijdsklassen	rustig	veel privacy
7	eengezinswoning	huur	Klasse 2	70 vierkante meter	4	wel		500 tot 1000 meter	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel contact met buren
8	eengezinswoning	Koop	Klasse 2	70 vierkante meter	4	wel		500 tot 1000 meter	Mix van bouwhoogtes	Mix van leeftijdsklassen	levendig	veel privacy
9	eengezinswoning	Koop	Klasse 1	100 vierkante meter	5	niet		500 tot 1000 meter	Mix van bouwhoogtes	Mix van leeftijdsklassen	rustig	veel privacy
10	appartement	Koop	Klasse 2	130 vierkante meter	5	wel		minder dan 500 meter	voormamelijk laagbouw	Mix van leeftijdsklassen	rustig	veel privacy
11	eengezinswoning	huur	Klasse 1	130 vierkante meter	4	wel		1000 meter of meer	Mix van bouwhoogtes	Gelijk aan die van u	rustig	veel privacy
12	eengezinswoning	Koop	Klasse 2	100 vierkante meter	3	niet		1000 meter of meer	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel privacy
13	eengezinswoning	Koop	klasse 3	70 vierkante meter	5	wel		1000 meter of meer	voormamelijk laagbouw	Mix van leeftijdsklassen	levendig	veel contact met buren
14	eengezinswoning	Koop	Klasse 1	70 vierkante meter	3	wel		minder dan 500 meter	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel privacy
15	eengezinswoning	huur	Klasse 2	100 vierkante meter	3	wel		1000 meter of meer	voormamelijk laagbouw	Mix van leeftijdsklassen	rustig	veel contact met buren
16	eengezinswoning	huur	Klasse 2	130 vierkante meter	5	niet		minder dan 500 meter	Mix van bouwhoogtes	Gelijk aan die van u	levendig	veel contact met buren
17	eengezinswoning	Koop	Klasse 2	130 vierkante meter	5	wel		minder dan 500 meter	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel privacy
18	appartement	Koop	Klasse 1	130 vierkante meter	4	niet		1000 meter of meer	voormamelijk laagbouw	Mix van leeftijdsklassen	rustig	veel contact met buren
19	appartement	Koop	Klasse 2	100 vierkante meter	3	wel		1000 meter of meer	Mix van bouwhoogtes	Gelijk aan die van u	levendig	veel privacy
20	appartement	Koop	Klasse 1	70 vierkante meter	3	wel		minder dan 500 meter	Mix van bouwhoogtes	Gelijk aan die van u	rustig	veel contact met buren
21	eengezinswoning	Koop	klasse 3	130 vierkante meter	3	wel		500 tot 1000 meter	voormamelijk laagbouw	Gelijk aan die van u	levendig	veel privacy
22	eengezinswoning	Koop	klasse 3	70 vierkante meter	5	niet		1000 meter of meer	Mix van bouwhoogtes	Gelijk aan die van u	rustig	veel privacy
23	appartement	Koop	Klasse 1	100 vierkante meter	5	wel		500 tot 1000 meter	voormamelijk laagbouw	Gelijk aan die van u	levendig	veel contact met buren
24	appartement	huur	klasse 3	100 vierkante meter	4	niet		minder dan 500 meter	voormamelijk laagbouw	Gelijk aan die van u	levendig	veel privacy
25	appartement	huur	klasse 3	70 vierkante meter	5	wel		1000 meter of meer	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel privacy
26	eengezinswoning	Koop	klasse 3	130 vierkante meter	3	niet		500 tot 1000 meter	voormamelijk laagbouw	Gelijk aan die van u	rustig	veel contact met buren
27	eengezinswoning	huur	Klasse 1	70 vierkante meter	3	niet		minder dan 500 meter	voormamelijk laagbouw	Mix van leeftijdsklassen	levendig	veel privacy

De in te vullen prijzen bij de profielen, afhankelijk van gegeven antwoord bij vraag 7.

koopprijzen per provincie (x1000)

Klasse	1	2	3
Groningen	250	350	450
Friesland	250	350	450
Drenthe	250	350	450
Overijssel	250	350	450
Gelderland	250	350	450
Utrecht	300	500	700
Flevoland	250	350	450
Noord-Holland	300	500	700
Zuid-holland	300	500	700
Zeeland	250	350	450
Noord-Brabant	250	350	450
Limburg	250	350	450

Huurprijzen per maand per provincie

Klasse	1	2	3
Groningen	775	875	975
Friesland	775	875	975
Drenthe	775	875	975
Overijssel	775	875	975
Gelderland	775	875	975
Utrecht	800	975	1150
Flevoland	775	875	975
Noord-Holland	800	1075	1350
Zuid-holland	800	975	1150
Zeeland	775	875	975
Noord-Brabant	800	975	1150
Limburg	775	875	975

Appendix C: Effect-coding

Table C.1. Used effect-coding for rating and ranking task.

Attribute	Level	Indicator 1	Indicator 2
Tenure	owner-occupied	1	
	rental	-1	
Housing type	one-family house	1	
	apartment	-1	
Housing surface	130 sqm	1	0
	100 sqm	0	1
	70 sqm	-1	-1
Number of rooms	3 rooms	1	0
	4 rooms	0	1
	5 rooms	-1	-1
Elderly housing	yes	1	
	no	-1	
Price	low class	1	0
	mid class	0	1
	high class	-1	-1
Building heights	mainly low	1	
	a mix of heights	-1	
Distance to health facilities	less than 500m	1	0
	500m-1000m	0	1
	more than 1000m	-1	-1
Contact with neighbours	a lot of privacy	1	
	a lot of contact with neighbours	-1	
Ambiance	quiet	1	
	lively	-1	
Composition of the neighbourhood	mix of ages	1	
	people of the same age	-1	

Table C.2. Used effect-coding to complement missing significance in ranking task.

Attribute	Level	Indicator 1	Indicator 2
Tenure	owner-occupied	-1	
	rental	1	
Housing type	one-family house	-1	
	apartment	1	
Housing surface	130 sqm	-1	-1
	100 sqm	0	1
	70 sqm	1	0
Number of rooms	3 rooms	-1	-1
	4 rooms	0	1
	5 rooms	1	0
Elderly housing	yes	-1	
	no	1	
Price	low class	-1	-1
	mid class	0	1
	high class	1	0
Building heights	mainly low	-1	
	a mix of heights	1	
Distance to health facilities	less than 500m	-1	-1
	500m-1000m	0	1
	more than 1000m	1	0
Contact with neighbours	a lot of privacy	-1	
	a lot of contact with neighbours	1	
Ambiance	quiet	-1	
	lively	1	

Appendix D:
Characteristics per reason to move

Reason 1: Health or need for care
Reason 2: Change in housing composition
Reason 3: Work
Reason 4: To decrease housing costs
Reason 5: To unlock money from the surplus of an owner-occupied dwelling
Reason 6: Current dwelling does not suffice desires/demands anymore
Reason 7: The living environment or living vicinity of the current dwelling does not suffice desires/demands anymore
Reason 8: To live closer to family, friends or acquaintances

Table D.1. Share of the sample that names a certain reason

	Reason 1	Reason 2	Reason 3	Reason 4	Reason 5	Reason 6	Reason 7	Reason 8	n =
Age									
55-64	14,7%	30,3%	3,8%	20,3%	23,6%	33,2%	27,6%	10,8%	852
65-74	36,4%	10,3%	0,8%	12,4%	24,3%	37,7%	17,5%	13,6%	604
75+	46,5%	5,3%	0,0%	14,0%	21,1%	22,8%	10,5%	22,8%	114
Mobility									
Normal mobility	19,4%	22,3%	2,6%	17,5%	24,8%	33,4%	23,1%	12,5%	1270
Decreased mobility	50,3%	14,3%	1,3%	14,0%	19,0%	37,7%	19,7%	13,7%	300
Current living situation									
Rental	15,2%	19,9%	2,4%	28,9%	2,4%	42,2%	34,6%	15,6%	211
Owner-occupied	26,9%	20,9%	2,4%	14,9%	27,0%	33,0%	20,6%	12,3%	1359
One-family house	26,8%	22,9%	2,2%	15,4%	23,2%	35,2%	20,1%	12,0%	1244
Multiple-family house	19,6%	12,8%	2,8%	22,4%	25,9%	30,5%	31,8%	15,6%	321
Really strongly urbanized	20,1%	18,0%	2,9%	18,0%	22,6%	37,7%	30,1%	14,2%	239
Strongly urbanized	26,2%	19,6%	3,3%	16,9%	23,1%	34,9%	24,7%	10,9%	450
Medium urbanized	26,6%	21,1%	2,0%	15,8%	24,6%	35,7%	20,5%	12,0%	342
Little urbanized	29,8%	24,6%	0,8%	19,0%	25,4%	29,8%	18,3%	13,5%	252
Not urbanized	21,3%	21,8%	2,3%	16,2%	22,2%	31,9%	17,6%	13,4%	216

Appendix E:
Outcome traditional analysis

Table E.1. Housing preferences of two different groups that are divided by their mobile condition.

	Total	Mobile	Not mobile
Desired tenure			
owner-occupied	85,7%	86,4%	83,0%
rental	14,3%	13,6%	17,0%
Desired housing type			
one-family house	54,2%	56,7%	43,7%
apartment	44,3%	42,0%	54,0%
unknown	1,5%	1,3%	2,3%
Desired housing surface			
<80 sqm	8,7%	8,1%	11,0%
80-120 sqm	65,7%	65,0%	69,0%
120 or more sqm	20,3%	21,2%	16,3%
unknown	5,4%	5,7%	3,7%
Desired number of rooms			
<4 rooms	34,1%	33,3%	37,3%
4 rooms	51,8%	52,1%	50,3%
5 or more rooms	12,3%	12,5%	11,3%
unknown	1,8%	2,0%	1,0%
Desire for housing that is suitable for elderly people			
yes	78,5%	75,4%	91,7%
no	11,2%	12,9%	4,0%
Indifferent	10,3%	11,7%	4,3%
Acceptable price			
low class	40,4%	39,4%	45,0%
mid class	46,3%	47,2%	42,3%
high class	7,9%	8,1%	7,0%
unknown	5,4%	5,3%	5,7%
n=	1570	1270	300

	Total	Mobile	Not mobile
Desired building heights in the neighbourhood			
mainly low	56,3%	47,5%	41,3%
	18,7%	18,9%	18,0%
	12,1%	11,3%	15,3%
a mix of heights	16,0%	15,4%	18,7%
unknown	6,9%	6,9%	6,7%
Acceptable door to door distance to health facilities			
less than 500m	7,6%	6,9%	10,3%
500m-1000m	55,3%	53,5%	63,0%
more than 1000m	31,1%	33,5%	21,0%
unknown	6,0%	6,1%	5,7%
Desired relationship with neighbours			
a lot of privacy	25,2%	26,1%	21,0%
	27,5%	27,2%	28,7%
	26,3%	26,3%	26,3%
a lot of contact with neighbours	16,0%	15,1%	19,7%
unknown	5,1%	5,3%	4,3%
Desired ambiance in the neighbourhood			
quiet	41,0%	41,6%	38,7%
	26,9%	26,5%	28,7%
	17,9%	17,4%	20,0%
lively	9,9%	10,2%	8,7%
unknown	4,2%	4,3%	4,0%
Desired composition of the neighbourhood			
people of the same age	10,4%	9,8%	12,7%
	14,9%	14,6%	16,0%
	23,4%	23,9%	21,3%
mix of ages	45,2%	45,3%	44,7%
unknown	6,2%	6,4%	5,3%
	1570	1270	300

Table E.2. Housing preferences of four different income groups that are divided by how many times they earn the Dutch average income.

	Total	<1	1-1.5	1.5-2	2+
Desired tenure					
owner-occupied	85,7%	86,9%	80,0%	84,8%	94,8%
rental	14,3%	13,1%	20,0%	15,2%	5,2%
Desired housing type					
one-family house	54,2%	53,6%	49,1%	53,8%	68,1%
apartment	44,3%	44,5%	49,3%	44,8%	31,4%
unknown	1,5%	1,8%	1,6%	1,4%	0,5%
Desired housing surface					
<80 sqm	8,7%	16,8%	8,9%	7,2%	3,1%
80-120 sqm	65,7%	66,4%	71,5%	63,1%	58,1%
120 or more sqm	20,3%	10,9%	15,7%	25,9%	36,6%
unknown	5,4%	5,8%	3,9%	3,8%	2,1%
Desired number of rooms					
<4 rooms	34,1%	47,1%	37,1%	29,7%	24,6%
4 rooms	51,8%	40,9%	52,4%	57,6%	51,3%
5 or more rooms	12,3%	9,5%	9,9%	11,4%	22,5%
unknown	1,8%	2,6%	0,6%	1,4%	1,6%
Desire for housing that is suitable for elderly people					
yes	78,5%	78,8%	80,0%	77,9%	75,4%
no	11,2%	9,1%	10,9%	13,8%	12,6%
Indifferent	10,3%	12,0%	9,1%	8,3%	12,0%
Acceptable price					
low class	40,4%	65,3%	44,9%	32,4%	15,7%
mid class	46,3%	25,5%	46,8%	57,2%	58,1%
high class	7,9%	2,2%	4,7%	9,7%	25,7%
unknown	5,4%	6,9%	3,5%	0,7%	0,5%
n=	1570	274	485	290	191

	Total	<1	1-1.5	1.5-2	2+
Desired building heights in the neighbourhood					
mainly low	56,3%	47,8%	42,9%	42,4%	54,5%
	18,7%	18,6%	20,6%	19,0%	18,8%
	12,1%	10,6%	12,8%	15,5%	11,0%
a mix of heights	16,0%	15,7%	18,4%	15,9%	11,5%
unknown	6,9%	7,3%	5,4%	7,2%	4,2%
Acceptable door to door distance to health facilities					
less than 500m	7,6%	9,9%	9,1%	6,9%	4,2%
500m-1000m	55,3%	60,2%	57,9%	52,4%	41,9%
more than 1000m	31,1%	23,0%	28,2%	36,6%	49,2%
unknown	6,0%	6,9%	4,7%	4,1%	4,7%
Desired relationship with neighbours					
a lot of privacy	25,2%	24,5%	21,6%	22,8%	24,4%
	27,5%	27,4%	27,4%	30,0%	22,0%
	26,3%	25,9%	27,8%	27,9%	27,2%
a lot of contact with neighbours	16,0%	16,8%	17,5%	15,5%	12,6%
unknown	5,1%	5,5%	5,6%	3,8%	4,2%
Desired ambiance in the neighbourhood					
quiet	41,0%	40,5%	40,4%	40,3%	42,4%
	26,9%	25,2%	28,0%	29,7%	27,7%
	17,9%	19,0%	17,7%	18,3%	14,1%
lively	9,9%	12,0%	9,7%	7,6%	11,5%
unknown	4,2%	3,3%	4,1%	4,1%	4,2%
Desired composition of the neighbourhood					
people of the same age	10,4%	13,9%	11,1%	9,7%	8,4%
	14,9%	12,8%	16,7%	16,2%	12,6%
	23,4%	23,4%	21,2%	22,1%	28,8%
mix of ages	45,2%	44,2%	45,8%	47,9%	44,0%
unknown	6,2%	5,8%	5,2%	4,1%	6,3%
	1570	274	485	290	191

Table E.3. Housing preferences of two different that are divided by their future household composition

	Total	Single	Couple
Desired tenure			
owner-occupied	85,7%	81,6%	86,2%
rental	14,3%	18,4%	13,8%
Desired housing type			
one-family house	54,2%	42,9%	53,0%
apartment	44,3%	55,1%	45,5%
unknown	1,5%	2,0%	1,4%
Desired housing surface			
<80 sqm	8,7%	18,0%	6,8%
80-120 sqm	65,7%	68,2%	67,4%
120 or more sqm	20,3%	9,4%	20,3%
unknown	5,4%	4,5%	5,5%
Desired number of rooms			
<4 rooms	34,1%	50,6%	32,7%
4 rooms	51,8%	41,6%	54,9%
5 or more rooms	12,3%	4,5%	11,2%
unknown	1,8%	3,3%	1,2%
Desire for housing that is suitable for elderly people			
yes	78,5%	77,6%	82,4%
no	11,2%	9,0%	9.5%
Indifferent	10,3%	13,5%	8,1%
Acceptable price			
low class	40,4%	55,9%	36,7%
mid class	46,3%	35,9%	50,1%
high class	7,9%	2,4%	8,2%
unknown	5,4%	5,7%	5,0%
n=	1570	245	1105

	Total	Single	Couple
Desired building heights in the neighbourhood			
mainly low	56,3%	40,8%	44,6%
	18,7%	18,8%	20,5%
	12,1%	17,1%	11,3%
a mix of heights	16,0%	16,7%	16,4%
unknown	6,9%	6.5%	7,2%
Acceptable door to door distance to health facilities			
less than 500m	7,6%	9,4%	7,1%
500m-1000m	55,3%	58,8%	56,4%
more than 1000m	31,1%	24,9%	31,1%
unknown	6,0%	6,9%	5,4%
Desired relationship with neighbours			
a lot of privacy	25,2%	27,3%	23,8%
	27,5%	25,7%	28,3%
	26,3%	27,3%	26,6%
a lot of contact with neighbours	16,0%	15,1%	16,4%
unknown	5,1%	4,5%	4,9%
Desired ambiance in the neighbourhood			
quiet	41,0%	40,8%	40,5%
	26,9%	26,1%	29,0%
	17,9%	19,6%	16,9%
lively	9,9%	9,8%	10,0%
unknown	4,2%	3,7%	3,7%
Desired composition of the neighbourhood			
people of the same age	10,4%	14,7%	9,7%
	14,9%	15,1%	15,6%
	23,4%	25,7%	23,9%
mix of ages	45,2%	41,2%	45,1%
unknown	6,2%	3,3%	5,8%
	1570	245	1105

Table E.4. Housing preferences of two different groups that are divided by their current tenure.

	Total	Rental	Owner-occupied
Desired tenure			
owner-occupied	85,7%	53,1%	90,8%
rental	14,3%	46,9%	9,2%
Desired housing type			
one-family house	54,2%	56,4%	53,9%
apartment	44,3%	42,7%	44,6%
unknown	1,5%	0,9%	1,5%
Desired housing surface			
<80 sqm	8,7%	12,3%	8,1%
80-120 sqm	65,7%	67,8%	65,4%
120 or more sqm	20,3%	12,3%	21,5%
unknown	5,4%	7,6%	5,0%
Desired number of rooms			
<4 rooms	34,1%	39,3%	33,3%
4 rooms	51,8%	46,0%	52,7%
5 or more rooms	12,3%	12,8%	12,2%
unknown	1,8%	1,9%	1,8%
Desire for housing that is suitable for elderly people			
yes	78,5%	65,9%	80,5%
no	11,2%	19,0%	10,0%
Indifferent	10,3%	15,2%	9,5%
Acceptable price			
low class	40,4%	46,9%	39,4%
mid class	46,3%	40,3%	47,2%
high class	7,9%	5,7%	8,2%
unknown	5,4%	7,1%	5,1%
n=	1570	211	1359

	Total	Rental	Owner-occupied
Desired building heights in the neighbourhood			
mainly low	56,3%	49,3%	45,8%
	18,7%	15,6%	19,2%
	12,1%	10,9%	12,3%
a mix of heights	16,0%	17,1%	15,8%
unknown	6,9%	7,1%	6,8%
Acceptable door to door distance to health facilities			
less than 500m	7,6%	7,1%	7,7%
500m-1000m	55,3%	52,6%	55,7%
more than 1000m	31,1%	34,6%	30,6%
unknown	6,0%	5,7%	6,0%
Desired relationship with neighbours			
a lot of privacy	25,2%	28,0%	24,7%
	27,5%	22,7%	28,2%
	26,3%	27,5%	26,1%
a lot of contact with neighbours	16,0%	19,0%	15,5%
unknown	5,1%	2,8%	5,4%
Desired ambiance in the neighbourhood			
quiet	41,0%	45,5%	40,3%
	26,9%	22,7%	27,6%
	17,9%	16,1%	18,2%
lively	9,9%	12,3%	9,6%
unknown	4,2%	3,3%	4,3%
Desired composition of the neighbourhood			
people of the same age	10,4%	14,7%	9,7%
	14,9%	13,3%	15,2%
	23,4%	20,4%	23,8%
mix of ages	45,2%	47,9%	44,7%
unknown	6,2%	3,8%	6,5%
	1570	211	1359

Table E.5. Housing preferences of two different groups that are divided by their current housing type.

	Total	One-family	Multiple-family
Desired tenure			
owner-occupied	85,7%	88,2%	76,3%
rental	14,3%	11,8%	23,7%
Desired housing type			
one-family house	54,2%	60,0%	31,8%
apartment	44,3%	38,4%	67,3%
unknown	1,5%	1,5%	0,9%
Desired housing surface			
<80 sqm	8,7%	7,2%	14,0%
80-120 sqm	65,7%	64,5%	70,4%
120 or more sqm	20,3%	22,1%	13,1%
unknown	5,4%	6,1%	2,5%
Desired number of rooms			
<4 rooms	34,1%	30,6%	47,0%
4 rooms	51,8%	53,7%	44,5%
5 or more rooms	12,3%	13,7%	6,9%
unknown	1,8%	1,9%	1,6%
Desire for housing that is suitable for elderly people			
yes	78,5%	79,8%	74,1%
no	11,2%	11,2%	10,9%
Indifferent	10,3%	9,0%	15,0%
Acceptable price			
low class	40,4%	40,0%	42,4%
mid class	46,3%	46,2%	46,7%
high class	7,9%	8,4%	5,9%
unknown	5,4%	5,4%	5,0%
n=	1570	1244	321

	Total	One-family	Multiple-family
Desired building heights in the neighbourhood			
mainly low	56,3%	50,4%	30,5%
	18,7%	19,1%	17,8%
	12,1%	10,7%	17,1%
a mix of heights	16,0%	13,3%	26,5%
unknown	6,9%	6,5%	8,1%
Acceptable door to door distance to health facilities			
less than 500m	7,6%	6,3%	12,5%
500m-1000m	55,3%	54,5%	58,6%
more than 1000m	31,1%	33,1%	23,7%
unknown	6,0%	6,1%	5,3%
Desired relationship with neighbours			
a lot of privacy	25,2%	25,4%	24,6%
	27,5%	28,3%	24,3%
	26,3%	25,5%	29,6%
a lot of contact with neighbours	16,0%	15,8%	16,8%
unknown	5,1%	5,1%	4,7%
Desired ambiance in the neighbourhood			
quiet	41,0%	41,6%	38,6%
	26,9%	27,3%	25,5%
	17,9%	17,8%	18,7%
lively	9,9%	9,1%	13,4%
unknown	4,2%	4,3%	3,7%
Desired composition of the neighbourhood			
people of the same age	10,4%	9,6%	13,7%
	14,9%	15,0%	14,6%
	23,4%	23,9%	21,5%
mix of ages	45,2%	44,7%	46,7%
unknown	6,2%	6,8%	3,4%
	1570	1244	321

Table E.6. Housing preferences of two different groups that are divided by their desired tenure.

	Total	Rental	Owner-occupied
Desired tenure			
owner-occupied	85,7%	0,0%	100%
rental	14,3%	100%	0,0%
Desired housing type			
one-family house	54,2%	27,2%	58,7%
apartment	44,3%	71,0%	39,9%
unknown	1,5%	1,8%	1,4%
Desired housing surface			
<80 sqm	8,7%	13,4%	7,9%
80-120 sqm	65,7%	71,9%	64,7%
120 or more sqm	20,3%	9,4%	22,1%
unknown	5,4%	5,4%	3,4%
Desired number of rooms			
<4 rooms	34,1%	44,6%	32,3%
4 rooms	51,8%	50,4%	52,0%
5 or more rooms	12,3%	4,0%	13,7%
unknown	1,8%	0,9%	2,0%
Desire for housing that is suitable for elderly people			
yes	78,5%	74,6%	79,2%
no	11,2%	12,5%	11,0%
Indifferent	10,3%	12,9%	9,8%
Acceptable price			
low class	40,4%	41,5%	40,3%
mid class	46,3%	47,8%	46,1%
high class	7,9%	5,8%	8,2%
unknown	5,4%	4,9%	5,4%
n=	1570	224	1346

	Total	Rental	Owner-occupied
Desired building heights in the neighbourhood			
mainly low	56,3%	32,6%	48,6%
	18,7%	15,2%	19,3%
	12,1%	17,0%	11,3%
a mix of heights	16,0%	24,1%	14,6%
unknown	6,9%	11,2%	6,2%
Acceptable door to door distance to health facilities			
less than 500m	7,6%	11,2%	7,0%
500m-1000m	55,3%	58,0%	54,8%
more than 1000m	31,1%	23,7%	32,4%
unknown	6,0%	7,1%	5,8%
Desired relationship with neighbours			
a lot of privacy	25,2%	23,2%	25,5%
	27,5%	25,9%	27,7%
	26,3%	28,6%	25,9%
a lot of contact with neighbours	16,0%	17,4%	15,8%
unknown	5,1%	4,9%	5,1%
Desired ambiance in the neighbourhood			
quiet	41,0%	41,5%	40,9%
	26,9%	26,3%	27,0%
	17,9%	17,0%	18,1%
lively	9,9%	11,2%	9,7%
unknown	4,2%	4,0%	4,2%
Desired composition of the neighbourhood			
people of the same age	10,4%	14,3%	9,7%
	14,9%	13,8%	15,1%
	23,4%	22,8%	23,5%
mix of ages	45,2%	43,3%	45,5%
unknown	6,2%	5,8%	6,2%
	1570	224	1346

Table E.7. Housing preferences of two different groups that are divided by their desired housing type.

	Total	One-family	Multiple-family
Desired tenure			
owner-occupied	85,7%	92,8%	77,2%
rental	14,3%	7,2%	22,8%
Desired housing type			
one-family house	54,2%	100%	0,0%
apartment	44,3%	0,0%	100%
unknown	1,5%	0,0%	0,0%
Desired housing surface			
<80 sqm	8,7%	7,4%	10,3%
80-120 sqm	65,7%	60,4%	72,4%
120 or more sqm	20,3%	26,8%	12,4%
unknown	5,4%	5,4%	4,9%
Desired number of rooms			
<4 rooms	34,1%	26,7%	43,0%
4 rooms	51,8%	52,3%	51,3%
5 or more rooms	12,3%	18,8%	4,3%
unknown	1,8%	2,2%	1,4%
Desire for housing that is suitable for elderly people			
yes	78,5%	72,6%	85,3%
no	11,2%	16,1%	5,5%
Indifferent	10,3%	11,3%	9,2%
Acceptable price			
low class	40,4%	37,6%	43,8%
mid class	46,3%	47,1%	45,5%
high class	7,9%	10,3%	5,0%
unknown	5,4%	4,9%	5,6%
n=	1570	851	696

	Total	One-family	Multiple-family
mainly low	56,3%	67,3%	20,4%
	18,7%	18,7%	19,0%
	12,1%	5,5%	20,1%
	16,0%	5,2%	29,2%
unknown	6,9%	3,3%	11,4%
Acceptable door to door distance to health facilities			
less than 500m	7,6%	4,3%	11,6%
	55,3%	51,8%	59,3%
more than 1000m	31,1%	38,2%	23,0%
unknown	6,0%	5,6%	6,0%
Desired relationship with neighbours			
a lot of privacy	25,2%	29,4%	20,5%
	27,5%	28,4%	26,3%
	26,3%	23,5%	29,2%
a lot of contact with neighbours	16,0%	14,6%	18,0%
unknown	5,1%	4,1%	6,0%
Desired ambiance in the neighbourhood			
	41,0%	47,6%	33,5%
	26,9%	25,9%	28,4%
	17,9%	15,6%	20,1%
lively	9,9%	7,1%	13,6%
unknown	4,2%	3,9%	4,3%
Desired composition of the neighbourhood			
people of the same age	10,4%	9,9%	11,2%
	14,9%	16,6%	13,1%
	23,4%	20,8%	26,0%
mix of ages	45,2%	45,5%	45,0%
unknown	6,2%	7,3%	4,7%
	1570	851	696

Table E.8. Housing preferences of two different groups that are divided by their desired tenure and housing type.

	Total	Owner-occupied one-family	Owner-occupied multiple-family	Rental one-family	Rental multiple-family
Desired tenure					
owner-occupied	85,7%	100,0%	100,0%	0,0%	0,0%
rental	14,3%	0,0%	0,0%	100,0%	100,0%
Desired housing type					
one-family house	54,2%	100,0%	0,0%	100,0%	0,0%
apartment	44,3%	0,0%	100,0%	0,0%	100,0%
unknown	1,5%	0,0%	0,0%	0,0%	0,0%
Desired housing surface					
<80 sqm	8,7%	7,2%	8,9%	9,8%	15,1%
80-120 sqm	65,7%	60,0%	71,9%	65,6%	74,2%
120 or more sqm	20,3%	28,0%	13,4%	11,5%	8,8%
unknown	5,4%	4,8%	5,8%	13,1%	1,9%
Desired number of rooms					
<4 rooms	34,1%	25,6%	42,1%	41,0%	45,9%
4 rooms	51,8%	52,7%	51,2%	47,5%	51,6%
5 or more rooms	12,3%	19,6%	4,8%	8,2%	2,5%
unknown	1,8%	2,2%	1,9%	3,3%	0,0%
Desire for housing that is suitable for elderly people					
yes	78,5%	73,3%	87,3%	63,9%	78,6%
no	11,2%	15,4%	4,8%	24,6%	7,5%
Indifferent	10,3%	11,3%	7,8%	11,5%	13,8%
Acceptable price					
low class	40,4%	36,2%	46,0%	55,7%	36,5%
mid class	46,3%	47,8%	43,8%	37,7%	51,6%
high class	7,9%	10,8%	4,7%	4,9%	6,3%
unknown	5,4%	5,2%	5,6%	1,6%	5,7%
n=	1570	790	537	61	159

	Total	Owner-occupied one-family	Owner-occupied multiple-family	Rental one-family	Rental multiple-family
mainly low	56,3%	67,3%	21,0%	67,2%	18,2%
	18,7%	18,5%	20,7%	21,3%	13,2%
	12,1%	5,4%	19,7%	6,6%	21,4%
	16,0%	5,3%	28,3%	3,3%	32,1%
unknown	6,9%	3,4%	10,2%	1,6%	15,1%
Acceptable door to door distance to health facilities					
less than 500m	7,6%	4,1%	11,4%	8,2%	12,6%
	55,3%	51,5%	59,6%	55,7%	58,5%
more than 1000m	31,1%	38,7%	23,5%	31,1%	21,4%
unknown	6,0%	5,7%	5,6%	4,9%	7,5%
Desired relationship with neighbours					
a lot of privacy	25,2%	29,2%	20,5%	31,1%	20,8%
	27,5%	28,7%	26,3%	24,6%	26,4%
	26,3%	23,3%	28,9%	26,2%	30,2%
a lot of contact with neighbours	16,0%	14,4%	18,2%	16,4%	17,0%
unknown	5,1%	4,3%	6,1%	1,6%	5,7%
Desired ambiance in the neighbourhood					
quiet	41,0%	47,3%	32,4%	50,8%	37,1%
	26,9%	25,7%	29,1%	27,9%	26,4%
	17,9%	15,8%	20,5%	13,1%	18,9%
lively	9,9%	7,1%	13,8%	6,6%	13,2%
unknown	4,2%	4,1%	4,3%	1,6%	4,4%
Desired composition of the neighbourhood					
people of the same age	10,4%	9,0%	11,0%	21,3%	11,9%
	14,9%	16,3%	13,4%	19,7%	11,9%
	23,4%	20,8%	26,6%	21,3%	23,9%
mix of ages	45,2%	46,3%	44,7%	34,4%	45,9%
unknown	6,2%	7,6%	4,3%	3,3%	6,3%
	1570	790	537	61	159

Table E.9. Housing preferences of three different groups that are divided by their willingness to pay.

	Total	Low	Mid	High
Desired tenure				
owner-occupied	85,7%	85,4%	85,3%	89,5%
rental	14,3%	14,6%	14,7%	10,5%
Desired housing type				
one-family house	54,2%	50,4%	55,2%	71,0%
apartment	44,3%	48,0%	43,6%	28,2%
unknown	1,5%	1,6%	1,2%	0,8%
Desired housing surface				
<80 sqm	8,7%	15,0%	4,4%	0,0%
80-120 sqm	65,7%	71,8%	66,9%	34,7%
120 or more sqm	20,3%	7,9%	24,6%	61,3%
unknown	5,4%	5,4%	4,1%	4,0%
Desired number of rooms				
<4 rooms	34,1%	43,5%	29,6%	9,7%
4 rooms	51,8%	48,7%	56,1%	45,2%
5 or more rooms	12,3%	5,7%	13,8%	41,9%
unknown	1,8%	2,2%	0,6%	3,2%
Desire for housing that is suitable for elderly people				
yes	78,5%	81,4%	78,0%	69,4%
no	11,2%	10,2%	10,9%	20,2%
Indifferent	10,3%	8,3%	11,1%	10,5%
Acceptable price				
low class	40,4%	100%	0,0%	0,0%
mid class	46,3%	0,0%	100%	0,0%
high class	7,9%	0,0%	0,0%	100%
unknown	5,4%	0,0%	0,0%	0,0%
n=	1570	635	727	124

	Total	55-64	65-74	75+
mainly low	56,3%	46,1%	44,8%	56,5%
	18,7%	19,4%	18,3%	16,9%
	12,1%	13,1%	11,7%	10,5%
	16,0%	15,6%	17,5%	12,9%
unknown	6,9%	5,8%	7,7%	3,2%
Acceptable distance to health facilities				
less than 500m	7,6%	8,7%	7,4%	9,2%
	55,3%	63,0%	57,1%	41,7%
more than 1000m	31,1%	28,4%	35,4%	49,2%
unknown	6,0%	7,2%	3,7%	3,2%
Contact with neighbours				
a lot of privacy	25,2%	22,0%	26,7%	40,3%
	27,5%	26,0%	29,0%	25,0%
	26,3%	27,7%	27,0%	18,5%
a lot of contact with neighbours	16,0%	18,6%	13,9%	12,1%
unknown	5,1%	5,7%	3,4%	4,0%
Ambiance				
quiet	41,0%	40,9%	40,0%	52,4%
	26,9%	26,0%	28,7%	23,4%
	17,9%	18,9%	18,6%	8,9%
lively	9,9%	9,9%	9,2%	11,3%
unknown	4,2%	4,3%	3,4%	4,0%
Composition of the neighbourhood				
people of the same age	10,4%	12,3%	9,8%	8,9%
	14,9%	15,4%	14,7%	14,5%
	23,4%	23,5%	23,9%	21,0%
mix of ages	45,2%	41,9%	47,6%	46,8%
unknown	6,2%	6,9%	4,0%	8,9%
	1570	635	727	124

Table E.10. Housing preferences of eight different groups that are divided by their reason to be willing to move.
Reason 1: Health or need for care
Reason 2: Change in housing composition
Reason 3: Work
Reason 4: To decrease housing costs
Reason 5: To unlock money from the surplus of an owner-occupied dwelling
Reason 6: Current dwelling does not suffice desires/demands anymore
Reason 7: The living environment or living vicinity of the current dwelling does not suffice desires/demands anymore
Reason 8: To live closer to family, friends or acquaintances

	Total	Reason 1	Reason 2	Reason 3	Reason 4	Reason 5	Reason 6	Reason 7	Reason 8
Desired tenure									
owner-occupied	85,7%	80,7%	89,9%	91,9%	83,7%	84,4%	84,5%	86,7%	86,0%
rental	14,3%	19,3%	10,1%	8,1%	16,3%	15,6%	15,5%	13,3%	14,0%
Desired housing type									
one-family house	54,2%	38,2%	59,2%	73,0%	59,1%	48,4%	53,6%	68,8%	54,2%
apartment	44,3%	60,3%	39,0%	24,3%	40,2%	50,5%	44,7%	30,0%	44,3%
unknown	1,5%	1,5%	1,5%	2,7%	0,8%	1,1%	1,7%	1,1%	1,5%
Desired housing surface									
<80 sqm	8,7%	8,8%	7,7%	0,0%	13,6%	12,4%	8,2%	5,7%	9,5%
80-120 sqm	65,7%	69,8%	67,5%	67,6%	64,0%	64,8%	66,5%	64,3%	62,5%
120 or more sqm	20,3%	15,1%	20,2%	29,7%	17,0%	20,2%	20,5%	25,5%	24,5%
unknown	5,4%	6,3%	4,6%	2,7%	5,3%	2,7%	4,8%	4,5%	3,5%
Desired number of rooms									
<4 rooms	34,1%	37,9%	32,8%	8,1%	35,3%	33,9%	32,4%	27,8%	30,0%
4 rooms	51,8%	51,3%	53,1%	70,3%	52,7%	54,8%	53,6%	50,4%	53,5%
5 or more rooms	12,3%	8,8%	12,3%	21,6%	10,6%	10,2%	11,9%	20,4%	15,5%
unknown	1,8%	2,0%	1,8%	0,0%	1,5%	1,1%	2,0%	1,4%	1,0%
Desire for housing that is suitable for elderly people									
yes	78,5%	93,0%	78,2%	70,3%	76,9%	78,8%	79,0%	69,7%	79,5%
no	11,2%	3,3%	13,8%	18,9%	12,5%	12,4%	9,9%	16,1%	11,0%
Indifferent	10,3%	3,8%	8,0%	10,8%	10,6%	8,9%	11,2%	14,2%	9,5%
Acceptable price									
low class	40,4%	39,9%	39,9%	45,9%	52,3%	42,5%	38,5%	36,3%	37,5%
mid class	46,3%	46,0%	50,3%	37,8%	40,2%	46,8%	46,9%	48,2%	53,0%
high class	7,9%	5,5%	6,4%	13,5%	3,8%	5,9%	9,5%	10,8%	5,5%
unknown	5,4%	8,5%	3,4%	2,7%	3,8%	4,8%	5,0%	4,8%	4,0%

Desired building heights in the neighbourhood									
mainly low	56,3%	35,9%	44,8%	59,5%	48,1%	43,3%	43,6%	58,9%	48,5%
	18,7%	23,4%	18,4%	18,9%	18,9%	16,7%	20,7%	13,9%	23,5%
	12,1%	16,6%	12,9%	8,1%	11,7%	12,9%	13,8%	8,5%	12,5%
a mix of heights	16,0%	15,8%	16,3%	8,1%	14,8%	19,4%	15,3%	14,2%	10,5%
unknown	6,9%	8,3%	7,7%	5,4%	6,4%	7,8%	6,7%	4,5%	5,0%
Acceptable door to door distance to health facilities									
less than 500m	7,6%	13,1%	6,1%	5,4%	8,3%	8,9%	6,3%	6,8%	8,0%
500m-1000m	55,3%	61,1%	50,9%	40,5%	51,5%	56,5%	57,4%	50,7%	57,0%
more than 1000m	31,1%	20,6%	31,6%	48,6%	33,3%	29,3%	31,5%	38,5%	32,0%
unknown	6,0%	5,3%	11,3%	5,4%	6,8%	5,4%	4,8%	4,0%	3,0%
Desired relationship with neighbours									
a lot of privacy	25,2%	20,1%	22,1%	18,9%	24,6%	26,6%	24,2%	32,9%	22,5%
	27,5%	25,4%	27,9%	21,6%	30,7%	24,2%	30,9%	27,2%	30,0%
a lot of contact	26,3%	35,2%	27,3%	29,7%	24,6%	28,0%	25,7%	20,7%	26,5%
with neighbours	16,0%	15,3%	17,5%	24,3%	13,6%	15,1%	15,3%	15,9%	17,5%
unknown	5,1%	4,0%	5,2%	5,4%	6,4%	6,2%	3,9%	3,4%	3,5%
Desired ambiance in the neighbourhood									
quiet	41,0%	36,4%	37,4%	40,5%	41,3%	40,6%	38,0%	50,1%	38,5%
	26,9%	30,4%	26,7%	21,6%	26,1%	27,2%	30,7%	24,4%	32,0%
	17,9%	22,9%	22,1%	18,9%	18,9%	17,5%	16,2%	12,7%	16,5%
lively	9,9%	7,0%	9,5%	13,5%	9,5%	10,8%	11,0%	8,5%	8,5%
unknown	4,2%	3,3%	4,3%	5,4%	4,2%	4,0%	4,1%	4,2%	4,5%
Desired composition of the neighbourhood									
people of the same	10,4%	12,6%	7,1%	10,8%	6,8%	10,5%	9,1%	15,6%	12,0%
age	14,9%	16,6%	13,5%	5,4%	16,7%	16,7%	15,1%	15,6%	13,5%
	23,4%	26,9%	25,8%	18,9%	23,9%	22,3%	26,1%	20,1%	24,5%
mix of ages	45,2%	40,2%	46,3%	62,2%	45,8%	46,0%	43,4%	40,8%	45,5%
unknown	6,2%	3,8%	7,4%	2,7%	6,8%	4,6%	6,3%	7,9%	4,5%
n=	1570	398	326	37	264	372	537	353	200

Appendix F:
Appreciation models for different age groups

Table F.1. Appreciation model of the housing qualities for the total sample, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	5,036	0,023	0,000	
Tenure				17,4%
owner-occupied	0,292	0,021	0,000	
rental	-0,292			
Housing type				0,5%
one-family house	-0,008	0,021	0,699*	
apartment	0,008			
Housing surface				16,5%
70 sqm	-0,302			
100 sqm	0,054	0,028	0,052*	
130 sqm	0,248	0,028	0,000	
Number of rooms				4,8%
3 rooms	-0,054	0,028	0,053*	
4 rooms	0,106	0,028	0,000	
5 rooms	-0,052			
Elderly housing				26,0%
yes	0,435	0,021	0,000	
no	-0,435			
Price				34,8%
low class	0,597	0,028	0,000	
mid class	-0,030	0,028	0,284*	
high class	-0,567			
				100%

*Coefficient B is not significant for a significance level of 95%

Table F.2. Appreciation model of the vicinity qualities for the total sample, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,449	0,018	0,000	
Building heights				30,8%
mainly low	0,219	0,015	0,000	
a mix of heights	-0,219			
Distance to health facilities				19,7%
less than 500m	0,110	0,020	0,000	
500m-1000m	0,060	0,020	0,003	
more than 1000m	-0,170			
Contact with neighbours				23,7%
a lot of privacy	0,168	0,015	0,000	
a lot of contact with neighbours	-0,168			
Ambiance				22,7%
quiet	0,161	0,015	0,000	
lively	-0,161			
Composition of the neighbourhood				3,1%
mix of ages	0,022	0,015	0,150*	
people of the same age	-0,022			
				100%

*Coefficient B is not significant for a significance level of 95%

Table F.3. Appreciation model of the housing qualities for the 55-64 age group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	5,052	0,031	0,000	
Tenure				19,5%
owner-occupied	0,358	0,028	0,000	
rental	-0,358			
Housing type				4,2%
one-family house	0,077	0,028	0,005	
apartment	-0,077			
Housing surface				16,2%
70 sqm	-0,322			
100 sqm	0,047	0,037	0,196*	
130 sqm	0,275	0,037	0,000	
Number of rooms				5,1%
3 rooms	-0,105	0,037	0,005	
4 rooms	0,083	0,037	0,024	
5 rooms	0,022			
Elderly housing				22,0%
yes	0,405	0,028	0,000	
no	-0,405			
Price				33,0%
low class	0,642	0,037	0,000	
mid class	-0,068	0,037	0,066*	
high class	-0,574			
				100%

*Coefficient B is not significant for a significance level of 95%

Table F.4. Appreciation model of the vicinity qualities for the 55-64 age group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,426	0,024	0,000	
Building heights				30,4%
mainly low	0,223	0,021	0,000	
a mix of heights	-0,223			
Distance to health facilities				17,4%
less than 500m	0,104	0,027	0,000	
500m-1000m	0,049	0,027	0,075*	
more than 1000m	-0,152			
Contact with neighbours				26,8%
a lot of privacy	0,196	0,021	0,000	
a lot of contact with neighbours	-0,196			
Ambiance				22,6%
quiet	0,166	0,020	0,000	
lively	-0,166			
Composition of the neighbourhood				2,8%
mix of ages	0,021	0,020	0,313*	
people of the same age	-0,021			
				100%

*Coefficient B is not significant for a significance level of 95%

Table F.5. Appreciation model of the housing qualities for the 65-74 age group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	5,004	0,038	0,000	
Tenure				13,5%
owner-occupied	0,236	0,034	0,000	
rental	-0,236			
Housing type				5,3%
one-family house	-0,092	0,034	0,007	
apartment	0,092			
Housing surface				13,8%
70 sqm	-0,262			
100 sqm	0,043	0,045	0,344*	
130 sqm	0,219	0,045	0,000	
Number of rooms				7,0%
3 rooms	-0,001	0,046	0,981*	
4 rooms	0,122	0,045	0,007	
5 rooms	-0,121			
Elderly housing				27,1%
yes	0,473	0,034	0,000	
no	-0,473			
Price				33,4%
low class	0,571	0,046	0,000	
mid class	0,026	0,046	0,570*	
high class	-0,596			
				100%

*Coefficient B is not significant for a significance level of 95%

Table F.6. Appreciation model of the vicinity qualities for the 65-74 age group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,503	0,029	0,000	
Building heights				33,3%
mainly low	0,215	0,025	0,000	
a mix of heights	-0,215			
Distance to health facilities				20,8%
less than 500m	0,111	0,033	0,001	
500m-1000m	0,048	0,033	0,146*	
more than 1000m	-0,159			
Contact with neighbours				22,3%
a lot of privacy	0,144	0,025	0,000	
a lot of contact with neighbours	-0,144			
Ambiance				21,8%
quiet	0,141	0,025	0,000	
lively	-0,141			
Composition of the neighbourhood				1,8%
mix of ages	0,011	0,025	0,644*	
people of the same age	-0,011			
				100%

*Coefficient B is not significant for a significance level of 95%

Table F.7. Appreciation model of the housing qualities for the 75+ age group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	5,078	0,089	0,000	
Tenure				
owner-occupied	0,112	0,081	0,167*	7,2%
rental	-0,112			
Housing type				10,9%
one-family house	-0,170	0,081	0,037	
apartment	0,170			
Housing surface				17,2%
70 sqm	-0,339			
100 sqm	0,141	0,111	0,206*	
130 sqm	0,199	0,109	0,068*	
Number of rooms				12,0%
3 rooms	0,033	0,109	0,763*	
4 rooms	0,171	0,112	0,126*	
5 rooms	-0,204			
Elderly housing				28,3%
yes	0,441	0,082	0,000*	
no	-0,441			
Price				24,4%
low class	0,400	0,109	0,000*	
mid class	-0,037	0,110	0,737*	
high class	-0,363			
				100%

*Coefficient B is not significant for a significance level of 95%

Table F.8. Appreciation model of the vicinity qualities for the 75+ age group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,336	0,070	0,000	
Building heights				22,6%
mainly low	0,196	0,061	0,001	
a mix of heights	-0,196			
Distance to health facilities				31,8%
less than 500m	0,156	0,081	0,053*	
500m-1000m	0,198	0,082	0,016	
more than 1000m	-0,354			
Contact with neighbours				9,0%
a lot of privacy	0,078	0,061	0,196*	
a lot of contact with neighbours	-0,078			
Ambiance				27,4%
quiet	0,238	0,061	0,000	
lively	-0,238			
Composition of the neighbourhood				9,2%
mix of ages	0,080	0,061	0,187*	
people of the same age	-0,080			
				100%

*Coefficient B is not significant for a significance level of 95%

Appendix G:
Appreciation models for different mobility conditions

Table G.1. Total Appreciation model for mobile people, based on the ranking task.

Variable	B	Std. Error	Sign.	importance
Ownership type				11,6%
owner-occupied	0,202	0,020	0,000	
rental	-0,202	0,020	0,000	
Housing type				2,7%
one-family house	-0,047	0,020	0,017	
apartment	0,047	0,020	0,017	
Housing surface				15,3%
70 sqm	-0,282	0,027	0,000	
100 sqm	0,033	0,026	0,217*	
130 sqm	0,249	0,027	0,000	
Number of rooms				3,5%
3 rooms	-0,040	0,026	0,126*	
4 rooms	0,080	0,026	0,002	
5 rooms	-0,040	0,027	0,141*	
Elderly housing				16,9%
yes	0,294	0,021	0,000	
no	-0,294	0,021	0,000	
Price				28,5%
low class	0,473	0,028	0,000	
mid class	0,045	0,027	0,092*	
high class	-0,518	0,028	0,000	
Building heights				4,8%
mainly low	0,084	0,020	0,000	
a mix of heights	-0,084	0,020	0,000	
Distance to health facilities				5,4%
less than 500m	0,110	0,027	0,000	
500m-1000m	-0,031	0,026	0,242*	
more than 1000m	-0,079	0,027	0,003	
Contact with neighbours				8,8%
a lot of privacy	0,153	0,020	0,000	
a lot of contact with neighbours	-0,153	0,020	0,000	
Ambiance				2,5%
quiet	0,044	0,020	0,030	
lively	-0,044	0,020	0,030	
				100%

*Coefficient B is not significant for a significance level of 95%

Table G.2. Appreciation model of the housing qualities for the mobile group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	5,048	0,025	0,000	
Ownership type				17,5%
owner-occupied	0,296	0,023	0,000	
rental	-0,296			
Housing type				0,8%
one-family house	0,013	0,023	0,566*	
apartment	-0,013			
Housing surface				16,6%
70 sqm	-0,314			
100 sqm	0,066	0,031	0,030	
130 sqm	0,248	0,031	0,000	
Number of rooms				4,6%
3 rooms	-0,063	0,031	0,040	
4 rooms	0,093	0,031	0,002	
5 rooms	-0,031			
Elderly housing				25,3%
yes	0,427	0,023	0,000	
no	-0,427			
Price				35,2%
low class	0,617	0,031	0,000	
mid class	-0,044	0,031	0,156*	
high class	-0,573			
				100%

*Coefficient B is not significant for a significance level of 95%

Table G.3. Appreciation model of the vicinity qualities for the mobile group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,456	0,019	0,000	
Building heights				30,3%
mainly low	0,219	0,017	0,000	
a mix of heights	-0,219			
Distance to health facilities				16,5%
less than 500m	0,102	0,022	0,000	
500m-1000m	0,034	0,022	0,121*	
more than 1000m	-0,136			
Contact with neighbours				25,8%
a lot of privacy	0,187	0,017	0,000	
a lot of contact with neighbours	-0,187			
Ambiance				23,3%
quiet	0,169	0,017	0,000	
lively	-0,169			
Composition of the neighbourhood				4,0%
mix of ages	0,029	0,017	0,000	
people of the same age	-0,029			
				100%

*Coefficient B is not significant for a significance level of 95%

Table G.4. Total Appreciation model for not-mobile people, based on the ranking task.

Variable	B	Std. Error	Sign.	importance
Ownership type				14,9%
owner-occupied	0,263	0,043	0,000	
rental	-0,263	0,043	0,000	
Housing type			0,200	5,7%
one-family house	-0,100	0,042	0,016	
apartment	0,100	0,042	0,016	
Housing surface			0,337	9,5%
70 sqm	-0,221	0,057	0,000	
100 sqm	0,105	0,054	0,052*	
130 sqm	0,116	0,055	0,035	
Number of rooms			0,157	4,4%
3 rooms	-0,057	0,057	0,316*	
4 rooms	0,100	0,055	0,067*	
5 rooms	-0,043	0,057	0,441*	
Elderly housing			0,792	22,4%
yes	0,396	0,044	0,000	
no	-0,396	0,044	0,000	
Price			0,816	23,1%
low class	0,368	0,056	0,000	
mid class	0,080	0,055	0,149*	
high class	-0,448	0,055	0,000	
Building heights			0,144	4,1%
mainly low	0,072	0,041	0,080*	
a mix of heights	-0,072	0,041	0,080*	
Distance to health facilities			0,268	7,6%
less than 500m	0,096	0,056	0,085*	
500m-1000m	0,076	0,055	0,167*	
more than 1000m	-0,172	0,540	0,002	
Contact with neighbours			0,114	3,2%
a lot of privacy	0,057	0,041	0,163*	
a lot of contact with neighbours	-0,057	0,041	0,163*	
Ambiance			0,177	5,0%
quiet	0,089	0,042	0,034	
lively	-0,089	0,042	0,034	
				100%

*Coefficient B is not significant for a significance level of 95%

Table G.5. Appreciation model of the housing qualities for the not-mobile group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	4,984	0,055	0,000	
Ownership type				16,6%
owner-occupied	0,274	0,050	0,000	
rental	-0,274			
Housing type				6,0%
one-family house	-0,099	0,050	0,047	
apartment	0,099			
Housing surface				7,7%
70 sqm	-0,253			
100 sqm	0,002	0,066	0,971*	
130 sqm	0,250	0,067	0,000	
Number of rooms				9,0%
3 rooms	-0,016	0,067	0,811*	
4 rooms	0,157	0,066	0,018	
5 rooms	-0,141			
Elderly housing				28,6%
yes	0,472	0,050	0,000	
no	-0,472			
Price				32,0%
low class	0,516	0,067	0,000	
mid class	0,023	0,066	0,732*	
high class	-0,539			
				100%

*Coefficient B is not significant for a significance level of 95%

Table G.6. Appreciation model of the vicinity qualities for the not-mobile group, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,417			
Building heights				31,4%
mainly low	0,213	0,039	0,000	
a mix of heights	-0,213			
Distance to health facilities				35,1%
less than 500m	0,147	0,051	0,004	
500m-1000m	0,165	0,051	0,001	
more than 1000m	-0,311			
Contact with neighbours				13,5%
a lot of privacy	0,092	0,038	0,017	
a lot of contact with neighbours	-0,092			
Ambiance				19,0%
quiet	0,129	0,038	0,001	
lively	-0,129			
Composition of the neighbourhood				1,0%
mix of ages	-0,007	0,038	0,854*	
people of the same age	0,007			
				100%

*Coefficient B is not significant for a significance level of 95%

Appendix H:
Appreciation models for different future household compositions

Table H.1. Total Appreciation model for future single households, based on the ranking task.

Variable	B	Std. Error	Sign.	importance
Ownership type				7,1%
owner-occupied	0,120	0,044	0,006	
rental	-0,120	0,044	0,006	
Housing type				10,0%
one-family house	-0,168	0,045	0,000	
apartment	0,168	0,045	0,000	
Housing surface				10,2%
70 sqm	-0,184	0,060	0,002	
100 sqm	0,025	0,060	0,678*	
130 sqm	0,159	0,062	0,010	
Number of rooms				4,9%
3 rooms	0,021	0,061	0,728*	
4 rooms	0,072	0,061	0,238*	
5 rooms	-0,093	0,062	0,133*	
Elderly housing				19,5%
yes	0,327	0,047	0,000	
no	-0,327	0,047	0,000	
Price				28,3%
low class	0,463	0,064	0,000	
mid class	0,024	0,062	0,700*	
high class	-0,487	0,063	0,000	
Building heights				6,6%
mainly low	0,111	0,046	0,016	
a mix of heights	-0,111	0,046	0,016	
Distance to health facilities				5,8%
less than 500m	0,097	0,060	0,107*	
500m-1000m	0,000	0,060	0,999*	
more than 1000m	-0,097	0,060	0,111*	
Contact with neighbours				7,0%
a lot of privacy	0,117	0,046	0,011	
a lot of contact with neighbours	-0,117	0,046	0,011	
Ambiance				0,6%
quiet	0,010	0,045	0,823*	
lively	-0,010	0,045	0,823*	
				100%

*Coefficient B is not significant for a significance level of 95%

Table H.2. Appreciation model of the housing qualities for future single households, based on the rating task

Variable	B	Std. Error	Sign.	importance
Constant	5,012	0,059	0,000	
Ownership type				11,7%
owner-occupied	0,196	0,053	0,000	
rental	-0,196			
Housing type				8,6%
one-family house	-0,144	0,054	0,008	
apartment	0,144			
Housing surface				8,3%
70 sqm	-0,165			
100 sqm	0,053	0,071	0,457*	
130 sqm	0,113	0,072	0,116*	
Number of rooms				5,6%
3 rooms	0,078	0,072	0,279*	
4 rooms	0,032	0,071	0,648*	
5 rooms	-0,110			
Elderly housing				28,8%
yes	0,481	0,054	0,000	
no	-0,481			
Price				37,0%
low class	0,612	0,072	0,000	
mid class	0,011	0,071	0,879*	
high class	-0,622			
				100%

*Coefficient B is not significant for a significance level of 95%

Table H.3. Appreciation model of the vicinity qualities for future single households, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,385	0,046	0,000	
Building heights				27,5%
mainly low	0,239	0,040	0,000	
a mix of heights	-0,239			
Distance to health facilities				26,0%
less than 500m	0,183	0,053	0,001	
500m-1000m	0,086	0,054	0,107*	
more than 1000m	-0,269			
Contact with neighbours				20,1%
a lot of privacy	0,174	0,040	0,000	
a lot of contact with neighbours	-0,174			
Ambiance				22,9%
quiet	0,198	0,040	0,000	
lively	-0,198			
Composition of the neighbourhood				3,5%
mix of ages	0,030	0,040	0,445*	
people of the same age	-0,030			
				100%

*Coefficient B is not significant for a significance level of 95%

Table H.4. Total Appreciation model for future couple households, based on the ranking task.

Variable	B	Std. Error	Sign.	importance
Ownership type				12,4%
owner-occupied	0,217	0,021	0,000	
rental	-0,217	0,021	0,000	
Housing type				4,0%
one-family house	-0,070	0,021	0,001	
apartment	0,070	0,021	0,001	
Housing surface				14,9%
70 sqm	-0,292	0,029	0,000	
100 sqm	0,063	0,028	0,028	
130 sqm	0,229	0,029	0,000	
Number of rooms				3,9%
3 rooms	-0,049	0,028	0,086*	
4 rooms	0,086	0,028	0,002	
5 rooms	-0,037	0,029	0,196*	
Elderly housing				17,2%
yes	0,300	0,022	0,000	
no	-0,300	0,022	0,000	
Price				27,2%
low class	0,438	0,029	0,000	
mid class	0,075	0,029	0,009	
high class	-0,513	0,030	0,000	
Building heights				4,4%
mainly low	0,077	0,021	0,000	
a mix of heights	-0,077	0,021	0,000	
Distance to health facilities				5,8%
less than 500m	0,102	0,029	0,000	
500m-1000m	0,000	0,028	0,991*	
more than 1000m	-0,102	0,290	0,000	
Contact with neighbours				7,3%
a lot of privacy	0,128	0,021	0,000	
a lot of contact with neighbours	-0,128	0,021	0,000	
Ambiance				2,9%
quiet	0,050	0,022	0,020	
lively	-0,050	0,022	0,020	
				100%

*Coefficient B is not significant for a significance level of 95%

Table H.5. Appreciation model of the housing qualities for future couple households, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	5,074	0,027	0,000	
Ownership type				16,7%
owner-occupied	0,283	0,025	0,000	
rental	-0,283			
Housing type				1,9%
one-family house	-0,031	0,025	0,204*	
apartment	0,031			
Housing surface				16,9%
70 sqm	-0,311			
100 sqm	0,050	0,033	0,130*	
130 sqm	0,261	0,033	0,000	
Number of rooms				5,1%
3 rooms	-0,057	0,033	0,088*	
4 rooms	0,115	0,033	0,001	
5 rooms	-0,058			
Elderly housing				25,3%
yes	0,428	0,025	0,000	
no	-0,428			
Price				34,2%
low class	0,593	0,033	0,000	
mid class	-0,027	0,033	0,411*	
high class	-0,622			
				100%

*Coefficient B is not significant for a significance level of 95%

Table H.6. Appreciation model of the vicinity qualities for future couple households, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,487	0,021	0,000	
Building heights				30,4%
mainly low	0,202	0,018	0,000	
a mix of heights	-0,202			
Distance to health facilities				18,9%
less than 500m	0,088	0,024	0,000	
500m-1000m	0,076	0,024	0,002	
more than 1000m	-0,163			
Contact with neighbours				24,4%
a lot of privacy	0,162	0,018	0,000	
a lot of contact with neighbours	-0,162			
Ambiance				23,2%
quiet	0,154	0,018	0,000	
lively	-0,154			
Composition of the neighbourhood				3,1%
mix of ages	0,021	0,018	0,254*	
people of the same age	-0,021			
				100%

*Coefficient B is not significant for a significance level of 95%

Appendix I:
Appreciation models for different groups that prefer an owner-occupied dwelling

Table I.1. Total Appreciation model for people that want to move to an one-family dwelling, based on the ranking task.

Variable	B	Std. Error	Sign.	importance
Ownership type				19,6%
owner-occupied	0,471	0,028	0,000	
rental	-0,471	0,028	0,000	
Housing type				12,0%
one-family house	0,288	0,027	0,000	
apartment	-0,288	0,027	0,000	
Housing surface				11,6%
70 sqm	-0,262	0,036	0,000	
100 sqm	-0,031	0,035	0,368*	
130 sqm	0,293	0,036	0,000	
Number of rooms				2,7%
3 rooms	-0,061	0,035	0,087*	
4 rooms	0,070	0,035	0,047	
5 rooms	-0,009	0,036	0,793*	
Elderly housing				13,4%
yes	0,320	0,028	0,000	
no	-0,320	0,028	0,000	
Price				19,1%
low class	0,439	0,036	0,000	
mid class	0,036	0,035	0,303*	
high class	-0,475	0,037	0,000	
Building heights				6,0%
mainly low	0,144	0,026	0,000	
a mix of heights	-0,144	0,026	0,000	
Distance to health facilities				4,5%
less than 500m	0,128	0,036	0,000	
500m-1000m	-0,041	0,035	0,245*	
more than 1000m	-0,088	0,035	0,047	
Contact with neighbours				8,1%
a lot of privacy	0,195	0,026	0,000	
a lot of contact with neighbours	-0,195	0,026	0,000	
Ambiance				3,0%
quiet	0,072	0,027	0,008	
lively	-0,072	0,027	0,008	
				100%

*Coefficient B is not significant for a significance level of 95%

Table I.2. Appreciation model of the housing qualities for people that want to move to an one-family dwelling, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	4,814	0,031	0,000	
Ownership type				25,1%
owner-occupied	0,558	0,028	0,000	
rental	-0,558			
Housing type				15,4%
one-family house	0,343	0,028	0,000	
apartment	-0,343			
Housing surface				13,6%
70 sqm	-0,309			
100 sqm	0,011	0,037	0,759*	
130 sqm	0,297	0,037	0,000	
Number of rooms				4,9%
3 rooms	-0,097	0,037	0,009	
4 rooms	0,119	0,037	0,001	
5 rooms	-0,021			
Elderly housing				18,9%
yes	0,420	0,028	0,000	
no	-0,420			
Price				22,1%
low class	0,515	0,037	0,000	
mid class	-0,049	0,037	0,193*	
high class	-0,466			
				100%

*Coefficient B is not significant for a significance level of 95%

Table I.3. Appreciation model of the vicinity qualities for people that want to move to an one-family dwelling, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,313	0,025	0,000	
Building heights				39,0%
mainly low	0,342	0,021	0,000	
a mix of heights	-0,342			
Distance to health facilities				10,7%
less than 500m	0,080	0,028	0,004	
500m-1000m	0,028	0,028	0,326*	
more than 1000m	-0,108			
Contact with neighbours				24,8%
a lot of privacy	0,218	0,021	0,000	
a lot of contact with neighbours	-0,218			
Ambiance				24,1%
quiet	0,211	0,021	0,000	
lively	-0,211			
Composition of the neighbourhood				1,3%
mix of ages	0,012	0,021	0,576*	
people of the same age	-0,012			
				100%

*Coefficient B is not significant for a significance level of 95%

Table I.4. Total Appreciation model for people that want to move to a multiple-family dwelling, based on the ranking task.

Variable	B	Std. Error	Sign.	importance
Ownership type				10,5%
owner-occupied	0,247	0,032	0,000	
rental	-0,247	0,032	0,000	
Housing type				20,6%
one-family house	-0,484	0,034	0,000	
apartment	0,484	0,034	0,000	
Housing surface				11,9%
70 sqm	-0,348	0,045	0,000	
100 sqm	0,138	0,043	0,001	
130 sqm	0,210	0,043	0,000	
Number of rooms				4,1%
3 rooms	-0,044	0,043	0,307*	
4 rooms	0,119	0,042	0,005	
5 rooms	-0,076	0,043	0,081*	
Elderly housing				15,9%
yes	0,372	0,034	0,000	
no	-0,372	0,034	0,000	
Price				26,0%
low class	0,549	0,046	0,000	
mid class	0,124	0,044	0,005	
high class	-0,673	0,046	0,000	
Building heights				2,2%
mainly low	0,053	0,033	0,106*	
a mix of heights	-0,053	0,033	0,106*	
Distance to health facilities				3,7%
less than 500m	0,077	0,044	0,079*	
500m-1000m	0,022	0,042	0,604*	
more than 1000m	-0,099	0,044	0,025	
Contact with neighbours				3,9%
a lot of privacy	0,091	0,033	0,006	
a lot of contact with neighbours	-0,091	0,033	0,006	
Ambiance				1,0%
quiet	-0,024	0,033	0,471*	
lively	0,024	0,033	0,471*	
				100%

*Coefficient B is not significant for a significance level of 95%

Table I.5. Appreciation model of the housing qualities for people that want to move to a multiple-family dwelling, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	5,246	0,038	0,000	
Ownership type				15,6%
owner-occupied	0,353	0,034	0,000	
rental	-0,353			
Housing type				19,3%
one-family house	-0,437	0,034	0,000	
apartment	0,437			
Housing surface				10,7%
70 sqm	-0,301			
100 sqm	0,118	0,046	0,010	
130 sqm	0,184	0,046	0,000	
Number of rooms				1,9%
3 rooms	-0,009	0,046	0,846*	
4 rooms	0,047	0,046	0,306*	
5 rooms	-0,038			
Elderly housing				20,6%
yes	0,467	0,035	0,000	
no	-0,467			
Price				31,8%
low class	0,715	0,046	0,000	
mid class	0,009	0,046	0,838*	
high class	-0,724			
				100%

*Coefficient B is not significant for a significance level of 95%

Table I.6. Appreciation model of the vicinity qualities for people that want to move to a multiple-family dwelling, based on the rating task.

Variable	B	Std. Error	Sign.	importance
Constant	6,628	0,029	0,000	
Building heights				19,3%
mainly low	0,090	0,025	0,000	
a mix of heights	-0,090			
Distance to health facilities				30,1%
less than 500m	0,105	0,034	0,002	
500m-1000m	0,071	0,034	0,038	
more than 1000m	-0,176			
Contact with neighbours				20,5%
a lot of privacy	0,096	0,025	0,000	
a lot of contact with neighbours	-0,096			
Ambiance				22,7%
quiet	0,106	0,025	0,000	
lively	-0,106			
Composition of the neighbourhood				7,5%
mix of ages	0,035	0,025	0,170*	
people of the same age	-0,035			
				100%

*Coefficient B is not significant for a significance level of 95%